



SEQUENCE LISTING

<110> Majmuder, Kamud

<120> Novel Polypeptides and Amino Acids Encoding Same

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<170> PatentIn Ver. 2.1

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Gly Ile Cys Leu Phe Ser Gln Arg Phe Leu Met Ile Leu Trp Leu Lys
    35              40              45

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Gly Val Val Phe Ser Val Thr Thr Val Asp Leu Lys Arg Lys Pro Ala
    50              55              60

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Asp Leu Gln Asn Lys Ala Pro Gly Asn His Pro Pro Leu Ile Thr Ser
    65              70              75              80

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Thr Val Lys Ser Asn Lys Ile Glu Glu Ala Pro Glu Glu Val Leu Cys
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Pro Pro Lys Tyr Leu Lys Leu Ser Pro Lys His Pro Glu Ser Asn Thr
    100             105             110

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Ala Gly Met Asp Ile Phe Ala Lys Phe Ser Ala Tyr Ile Lys Asn Ser
    115             120             125

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Arg Pro Glu Val Asn Glu Ala Leu Val Lys His Leu Leu Lys Thr Leu
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Gln Lys Met Glu Tyr Leu Asn Ser Pro Leu Pro Asp Glu Ile Asp Glu
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    165             170             175

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    180             185             190

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Val Lys Lys Lys Glu Lys Tyr Arg Lys Tyr Lys Asn Ile Glu Lys Lys
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Gly Met Thr Gly Ile Trp Arg Tyr Leu Thr Asn Thr Ser Ser Arg Asp
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Glu Thr Val Asn Val Val
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35 40 45

Leu Met Asp Ser Lys Gly Phe Asp Glu Asn Lys Tyr Met Lys Glu Leu
50 55 60

Gly Val Gly Leu Ala Leu Cys Glu Lys Lys Gly Ala Met Ala Lys Lys
65 70 75 80

Asp Cys Ile Ser Phe Phe Asp Gly Lys Asn Leu Thr Ile Lys Met Glu
85 90 95

Ser Thr Leu Lys Ser Tyr Ser Phe Leu Thr Leu Arg Gly Gly Lys Phe
100 105 110

Lys Glu Thr Thr Gly Asp Gly Arg Lys Thr Gln Thr Cys Thr Phe Thr
 115 120 125
 Tyr Gly Thr Leu Val Arg His Gln Lys Trp Asn Gly Lys Glu Gly Lys
 130 135 140
 Ile Arg Lys Leu Lys Asp Arg Lys Leu Val Val Asp Cys Ile Ile Asn
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 <213> Homo sapiens

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 35 40 45
 Glu Gly Glu Gly Cys Ala Pro Cys Arg Pro Glu Glu Cys Ala Ala Pro
 50 55 60
 Arg Gly Cys Leu Ala Gly Arg Val Arg Asp Ala Cys Gly Cys Cys Trp

65	70	75	80
Glu Cys Ala Asn Leu Glu Gly Gln Leu Cys Asp Leu Asp Pro Ser Ala	85	90	95
His Phe Tyr Gly His Cys Gly Glu Gln Leu Glu Cys Arg Leu Asp Thr	100	105	110
Gly Gly Asp Leu Ser Arg Gly Glu Val Pro Glu Pro Leu Cys Ala Cys	115	120	125
Arg Ser Gln Ser Pro Leu Cys Gly Ser Asp Gly His Thr Tyr Ser Gln	130	135	140
Ile Cys Arg Leu Gln Glu Ala Ala Arg Ala Arg Pro Asp Ala Asn Leu	145	150	155
Thr Val Ala His Pro Gly Pro Cys Glu Ser Gly Pro Gln Ile Val Ser	165	170	175
His Pro Tyr Asp Thr Trp Asn Val Thr Gly Gln Asp Val Ile Phe Gly	180	185	190
Cys Glu Val Phe Ala Tyr Pro Met Ala Ser Ile Glu Trp Arg Lys Asp	195	200	205
Gly Leu Asp Ile Gln Leu Pro Gly Asp Asp Pro His Ile Ser Val Gln	210	215	220
Phe Arg Gly Gly Pro Gln Arg Phe Glu Val Thr Gly Trp Leu Gln Ile	225	230	235
Gln Ala Val Arg Pro Ser Asp Glu Gly Thr Tyr Arg Cys Leu Gly Arg	245	250	255
Asn Ala Leu Gly Gln Val Glu Ala Pro Ala Ser Leu Thr Val Leu Thr	260	265	270
Pro Asp Gln Leu Asn Ser Thr Gly Ile Pro Gln Leu Arg Ser Leu Asn	275	280	285
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ccatgtcaga gactggggcc attacttcaa gaccatcaag gaactgaggg ctcagatctt 420
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35 40 45

Ser Cys Ser Thr Ser Phe Trp Gly Gly Leu Gly Ser Gly Gly Leu Ala
50 55 60

Thr Glu Met Ala Gly Gly Leu Ala Glu Met Gly Gly Ile Gln Asn Glu
65 70 75 80

Lys Glu Thr Met Gln Ser Leu Asn Asp His Leu Asp Tyr Leu Asp Arg
85 90 95

Val Arg Asn Leu Glu Thr Glu Asn Trp Arg Leu Glu Ser Lys Ile Gln
100 105 110

Glu Tyr Leu Glu Lys Arg Pro His Val Arg Asp Trp Gly His Tyr Phe
115 120 125

Lys Thr Ile Lys Glu Leu Arg Ala Gln Ile Phe Ala Asn Thr Val Asp
130 135 140

Asn Val His Ile Ile Leu Gln Ile Asp Asn Ala Arg Leu Ala Ala Asp
145 150 155 160

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Thr	Leu	Leu	Gln	Leu	Glu	Thr	Glu	Met	Gly	Ala	Leu	Lys	Glu	Glu	Leu	195	200	205
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Gln	Val	Leu	Ala	Lys	Val	Met	Ala	Asp	Ile	Arg	Ala	Gln	Tyr	Asp	Glu	245	250	255
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Leu	Arg	Glu	Val	Glu	Ala	Arg	Tyr	Ala	Leu	Gln	Met	Glu	Gln	Leu	Asn	325	330	335
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Glu	Gly	Leu	Asn	Leu	Gly	Asp	Ala	Leu	Asp	Ser	Ser	Asn	Ser	Met	Gln	385	390	395
Thr	Ile	Gln	Lys	Thr	Thr	Thr	Arg	Gln	Ile	Val	Asp	Ser	Lys	Val	Val	405	410	415
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<212> DNA

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<212> PRT

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Gly Thr Thr Lys Val Pro Gly Ser Thr Pro Ala Leu His Ser Ser Pro
      35                      40                      45

Ala Gln Pro Ser Ala Glu Thr Ala Asn Thr Ser Glu Gln His Val Arg
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Thr	Pro	Thr	Pro	Ala	Gly	Thr	Leu	Asp	Pro	Ala	Glu	Lys	Gln	Glu	Pro		100	105	110	
Gly	Cys	Pro	Pro	Leu	Gly	Leu	Glu	Ser	Leu	Arg	Val	Ser	Asp	Ser	Arg		115	120	125	
Leu	Glu	Ala	Ser	Ser	Ser	Gln	Ser	Phe	Gly	Leu	Gly	Pro	His	Arg	Gly		130	135	140	
Arg	Leu	Asn	Ile	Gln	Ser	Gly	Leu	Glu	Asp	Gly	Asp	Leu	Tyr	Asp	Gly		145	150	155	160
Ala	Trp	Cys	Ala	Glu	Glu	Gln	Asp	Ala	Asp	Pro	Trp	Phe	Gln	Val	Asp		165	170	175	
Ala	Gly	His	Pro	Thr	Arg	Phe	Ser	Gly	Val	Ile	Thr	Gln	Gly	Arg	Asn		180	185	190	
Ser	Val	Trp	Arg	Tyr	Asp	Trp	Val	Thr	Ser	Tyr	Lys	Val	Gln	Phe	Ser		195	200	205	
Asn	Asp	Ser	Arg	Thr	Trp	Trp	Gly	Ser	Arg	Asn	His	Ser	Ser	Gly	Met		210	215	220	
Asp	Ala	Val	Phe	Pro	Ala	Asn	Ser	Asp	Pro	Glu	Thr	Pro	Val	Leu	Asn		225	230	235	240
Leu	Leu	Pro	Glu	Pro	Gln	Val	Ala	Arg	Phe	Ile	Arg	Leu	Leu	Pro	Gln		245	250	255	
Thr	Trp	Leu	Gln	Gly	Gly	Ala	Pro	Cys	Leu	Arg	Ala	Glu	Ile	Leu	Ala		260	265	270	
Cys	Pro	Val	Ser	Asp	Pro	Asn	Asp	Leu	Phe	Leu	Glu	Ala	Pro	Ala	Ser		275	280	285	
Gly	Ser	Ser	Asp	Pro	Leu	Asp	Phe	Gln	His	His	Asn	Tyr	Lys	Ala	Met		290	295	300	
Arg	Lys	Leu	Met	Lys	Gln	Val	Gln	Glu	Gln	Cys	Pro	Asn	Ile	Thr	Arg		305	310	315	320
Ile	Tyr	Ser	Ile	Gly	Lys	Ser	Tyr	Gln	Gly	Leu	Lys	Leu	Tyr	Val	Met		325	330	335	
Glu	Met	Ser	Asp	Lys	Pro	Gly	Glu	His	Glu	Leu	Gly	Glu	Pro	Glu	Val		340	345	350	
Arg	Tyr	Val	Ala	Gly	Met	His	Gly	Asn	Glu	Ala	Leu	Gly	Arg	Glu	Leu		355	360	365	

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 Ser Met Asn Pro Asp Gly Tyr Glu Ile Ala Tyr His Arg Gly Ser Glu
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 Leu Val Gly Trp Ala Glu Gly Arg Trp Asn Asn Gln Ser Ile Asp Leu
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 435 440 445
 Asp Gly Lys Val Pro His Ile Val Pro Asn His His Leu Pro Leu Pro
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 530 535 540
 Thr Ser Arg Arg Pro Cys His Ser Gln Asp Phe Ser Val His Gly Asn
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Lys Arg Gly Pro Phe Pro Cys Asn Phe Val Leu Thr Lys Thr Pro Lys
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<212> DNA
<213> Homo sapiens

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acgggggccc ggggctgctg aacgtcagcc ggatcatcgt ccacccaac tatgtcactg 360
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atgtcaggag ggtcaagctc tcccgggtct cgctggagct caccggaag gaccagtgt 480
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cagggcacac tggcgaccgg cagctcatcc tggatgacat gctgtgtgcc ggcagcgagg 660
gccgagactc ctgtcagggt gactccggcg gccctctggt ctgcaggctg cgggggtcct 720
ggcgcttgtt gggggtgggt agctggggct acggctgtac cctgcgggac tttccggcg 780
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<210> 12
<211> 278
<212> PRT
<213> Homo sapiens

<400> 12
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Ser Lys Thr Pro Val Pro Val Pro Glu Asn Asp Leu Val Gly Ile Val
20 25 30
Gly Gly His Asn Ala Pro Pro Gly Lys Trp Pro Trp Gln Val Ser Leu
35 40 45
Arg Val Tyr Ser Tyr His Trp Ala Ser Trp Ala His Ile Cys Gly Gly
50 55 60
Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Ile Phe
65 70 75 80

Trp Lys Asp Thr Asp Pro Ser Ile Tyr Arg Ile His Ala Gly Asp Val
 85 90 95
 Tyr Leu Tyr Gly Gly Arg Gly Leu Leu Asn Val Ser Arg Ile Ile Val
 100 105 110
 His Pro Asn Tyr Val Thr Ala Gly Leu Gly Ala Asp Val Ala Leu Leu
 115 120 125
 Gln Leu Val Ser Pro Met Ile Gly Ala Ala Asn Val Arg Thr Val Lys
 130 135 140
 Leu Ser Pro Val Ser Leu Glu Leu Thr Pro Lys Asp Gln Cys Trp Val
 145 150 155 160
 Thr Gly Trp Gly Ala Ile Arg Met Phe Glu Ser Leu Pro Pro Pro Tyr
 165 170 175
 Arg Leu Gln Gln Ala Ser Val Gln Val Leu Glu Asn Ala Val Cys Glu
 180 185 190
 Gln Pro Tyr Arg Asn Ala Ser Gly His Thr Gly Asp Arg Gln Leu Ile
 195 200 205
 Leu Asp Asp Met Leu Cys Ala Gly Ser Glu Gly Arg Asp Ser Cys Gln
 210 215 220
 Gly Asp Ser Gly Gly Pro Leu Val Cys Arg Leu Arg Gly Ser Trp Arg
 225 230 235 240
 Leu Val Gly Val Val Ser Trp Gly Tyr Gly Cys Thr Leu Arg Asp Phe
 245 250 255
 Pro Gly Val Tyr Thr His Val Gln Ile Tyr Val Leu Trp Ile Leu Gln
 260 265 270
 Gln Val Gly Glu Leu Pro
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<210> 13

<211> 2145

<212> DNA

<213> Homo sapiens

<400> 13

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cgctgggtgc gtcagtaccg cccgcgggag tacctggcag gcgacgtcat gtctgggctg 300
gtcatcggca tcatcctggt cccgcaggcc atcgctact cattgctggc cgggctgcag 360
cccatctaca gcctctatac gtcttcttcc gccaacctca tctacttcct catgggcacc 420
tcacggcatg tctccgtggg catcttcagc ctgctttgcc tcatggtggg gcaggtggtg 480
gaccgggagc tccagctggc cggctttgac ccctcccagg acggcctgca gcccgagacc 540
aacagcagca ccctcaacgg ctcggtgctg atgctggact gcgggcgtga ctgctacgcc 600

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atccgtgtcg ccaccgccct cacgctgatg accgggcttt accaggctcct catgggcgtc 660
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ggggcctccg tgaccatcct gacctcgcag ctcaaaccac tgctgggctg gcggatcccc 780
cggcaccagg ggcccggcat ggtggctctc acatggctga gcctgctgcg cggcgccggg 840
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gcctgcccag cagcctctgc tccctcctgg ggaccacag cagacgtctg caagccactg 2040
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<210> 14

<211> 633

<212> PRT

<213> Homo sapiens

<400> 14

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Met Asp Glu Ser Pro Glu Pro Leu Gln Gln Gly Arg Gly Pro Val Pro
  1                      5                      10                      15

Val Arg Arg Gln Arg Pro Ala Pro Arg Gly Leu Arg Glu Met Leu Lys
      20                      25                      30

Ala Arg Leu Trp Cys Ser Cys Ser Cys Ser Val Leu Cys Val Arg Ala
      35                      40                      45

Leu Val Gln Asp Leu Leu Pro Ala Thr Arg Trp Leu Arg Gln Tyr Arg
      50                      55                      60

Pro Arg Glu Tyr Leu Ala Gly Asp Val Met Ser Gly Leu Val Ile Gly
      65                      70                      75                      80

Ile Ile Leu Val Pro Gln Ala Ile Ala Tyr Ser Leu Leu Ala Gly Leu
      85                      90                      95

Gln Pro Ile Tyr Ser Leu Tyr Thr Ser Phe Phe Ala Asn Leu Ile Tyr
      100                      105                      110

Phe Leu Met Gly Thr Ser Arg His Val Ser Val Gly Ile Phe Ser Leu
      115                      120                      125

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Leu Cys Leu Met Val Gly Gln Val Val Asp Arg Glu Leu Gln Leu Ala
 130 135 140
 Gly Phe Asp Pro Ser Gln Asp Gly Leu Gln Pro Gly Ala Asn Ser Ser
 145 150 155 160
 Thr Leu Asn Gly Ser Ala Ala Met Leu Asp Cys Gly Arg Asp Cys Tyr
 165 170 175
 Ala Ile Arg Val Ala Thr Ala Leu Thr Leu Met Thr Gly Leu Tyr Gln
 180 185 190
 Val Leu Met Gly Val Leu Arg Leu Gly Phe Val Ser Ala Tyr Leu Ser
 195 200 205
 Gln Pro Leu Leu Asp Gly Phe Ala Met Gly Ala Ser Val Thr Ile Leu
 210 215 220
 Thr Ser Gln Leu Lys His Leu Leu Gly Val Arg Ile Pro Arg His Gln
 225 230 235 240
 Gly Pro Gly Met Val Val Leu Thr Trp Leu Ser Leu Leu Arg Gly Ala
 245 250 255
 Gly Gln Ala Asn Val Cys Asp Val Val Thr Ser Thr Val Cys Leu Ala
 260 265 270
 Val Leu Leu Ala Ala Lys Glu Leu Ser Asp Arg Tyr Arg His Arg Leu
 275 280 285
 Arg Val Pro Leu Pro Thr Glu Leu Leu Val Ile Val Val Ala Thr Leu
 290 295 300
 Val Ser His Phe Gly Gln Leu His Lys Arg Phe Gly Ser Ser Val Ala
 305 310 315 320
 Gly Asp Ile Pro Thr Gly Phe Met Pro Pro Gln Val Pro Glu Pro Arg
 325 330 335
 Leu Met Gln Arg Val Ala Leu Asp Ala Val Ala Leu Ala Leu Val Ala
 340 345 350
 Ala Ala Phe Ser Ile Ser Leu Ala Glu Met Phe Ala Arg Ser His Gly
 355 360 365
 Tyr Ser Val Arg Ala Asn Gln Glu Leu Leu Ala Val His Arg Gly His
 370 375 380
 Leu Arg Gly Ala Cys Gln Gly Val Gly Leu Pro Gly Cys Gly Gly Ser
 385 390 395 400
 Pro Ala Asp Ala Leu Val Trp Ala Gly Thr Gly Thr Cys Met Leu Val
 405 410 415
 Ser Thr Glu Ala Gly Leu Leu Ala Gly Val Ile Leu Ser Leu Leu Ser
 420 425 430

Leu Ala Gly Arg Thr Gln Lys Pro Arg Thr Ala Leu Leu Ala Arg Ile
 435 440 445
 Gly Asp Thr Ala Phe Tyr Glu Asp Ala Thr Glu Phe Glu Gly Leu Val
 450 455 460
 Pro Glu Pro Gly Val Arg Val Phe Arg Phe Gly Gly Pro Leu Tyr Tyr
 465 470 475 480
 Ala Asn Lys Asp Phe Phe Leu Gln Ser Leu Tyr Ser Leu Thr Gly Leu
 485 490 495
 Asp Ala Gly Cys Met Ala Ala Arg Arg Lys Glu Gly Gly Ser Glu Thr
 500 505 510
 Gly Val Gly Glu Gly Gly Pro Ala Gln Gly Glu Asp Leu Gly Pro Val
 515 520 525
 Ser Thr Arg Ala Ala Leu Val Pro Ala Ala Ala Gly Phe His Thr Val
 530 535 540
 Val Ile Asp Cys Ala Pro Leu Leu Phe Leu Asp Ala Ala Gly Val Ser
 545 550 555 560
 Thr Leu Gln Asp Leu Arg Arg Asp Tyr Gly Ala Leu Gly Ile Ser Leu
 565 570 575
 Leu Leu Ala Cys Cys Ser Pro Pro Val Arg Asp Ile Leu Ser Arg Gly
 580 585 590
 Gly Phe Leu Gly Glu Gly Pro Gly Asp Thr Ala Glu Glu Glu Gln Leu
 595 600 605
 Phe Leu Ser Val His Asp Ala Val Gln Thr Ala Arg Ala Arg His Arg
 610 615 620
 Glu Leu Glu Ala Thr Asp Ala His Leu
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<210> 15

<211> 406

<212> DNA

<213> Homo sapiens

<400> 15

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 attatcagtc aagaagaaga caaggtggtg atcaggattc aaagtatggt caagaacaca 180
 gaggttagtt tccatctggg agaagagttt gatgaaacca ctacagatga cagaaactgc 240
 aagtttggtt ttagtctgga cagagacaaa ctcattcaca tacagaaatg ggatgacaaa 300
 gaaacatatt ttataagaga aattaagtat ggtgaaatgg ttatgacctt tacttttgggt 360
 gatgatgtgg ttgccgttca ccactataag aaggcataaa aatggt 406

<210> 16

<211> 132
 <212> PRT
 <213> Homo sapiens

<400> 16
 Val Glu Glu Ala Phe Cys Asn Thr Trp Lys Leu Thr Asp Gln Asn Phe
 1 5 10 15
 Asp Glu Tyr Met Lys Ala Leu Gly Met Gly Phe Val Thr Arg Gln Val
 20 25 30
 Gly Asn Val Asp Lys Pro Arg Val Ile Ile Ser Gln Glu Glu Asp Lys
 35 40 45
 Val Val Ile Arg Ile Gln Ser Met Phe Lys Asn Thr Glu Val Ser Phe
 50 55 60
 His Leu Gly Glu Glu Phe Asp Glu Thr Thr Thr Asp Asp Arg Asn Cys
 65 70 75 80
 Lys Phe Val Val Ser Leu Asp Arg Asp Lys Leu Ile His Ile Gln Lys
 85 90 95
 Trp Asp Asp Lys Glu Thr Tyr Phe Ile Arg Glu Ile Lys Tyr Gly Glu
 100 105 110
 Met Val Met Thr Phe Thr Phe Gly Asp Asp Val Val Ala Val His His
 115 120 125
 Tyr Lys Lys Ala
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<210> 17
 <211> 418
 <212> DNA
 <213> Homo sapiens

<400> 17
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 aaaccaagag tgattatcag tcaagaagaa gacaaggtgg tgatcaggat tcaaagtatg 180
 ttcaagaaca cagaggtttag tttccatctg ggagaagagt ttgatgaaac cactacagat 240
 gacagaaact gcaagtttgt tgttagtctg gacagagaca aactcattca catacagaaa 300
 tgggatgaca aagaaacata ttttataaga gaaattaagt atggtgaaat gggttatgacc 360
 tttacttttg gtgatgatgt ggttgccggt caccactata agaaggcata aaaatggt 418

<210> 18
 <211> 135
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Val Arg Val Glu Glu Ala Phe Cys Asn Thr Trp Lys Leu Thr Asp
 1 5 10 15

Gln Asn Phe Asp Glu Tyr Met Lys Ala Leu Gly Met Gly Phe Val Thr
 20 25 30
 Arg Gln Val Gly Asn Val Asp Lys Pro Arg Val Ile Ile Ser Gln Glu
 35 40 45
 Glu Asp Lys Val Val Ile Arg Ile Gln Ser Met Phe Lys Asn Thr Glu
 50 55 60
 Val Ser Phe His Leu Gly Glu Glu Phe Asp Glu Thr Thr Thr Asp Asp
 65 70 75 80
 Arg Asn Cys Lys Phe Val Val Ser Leu Asp Arg Asp Lys Leu Ile His
 85 90 95
 Ile Gln Lys Trp Asp Asp Lys Glu Thr Tyr Phe Ile Arg Glu Ile Lys
 100 105 110
 Tyr Gly Glu Met Val Met Thr Phe Thr Phe Gly Asp Asp Val Val Ala
 115 120 125
 Val His His Tyr Lys Lys Ala
 130 135

<210> 19

<211> 1119

<212> DNA

<213> Homo sapiens

<400> 19

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gtgtttgtgg acttcctggt ggaagatttc atcttgaaca tgcagatgcc tcaggtcccc 300
gacaagatca tagaagtgtt ggaattctca tccatccaca cctccatatt gattactgta 360
ccgttaacca ttgacaggta tatcgctgtc tgccaccgcg tcaagtacca cacggtctca 420
taccagccc gcaccggaa agtcattgta agtggttaca tcacctgctt cctgaccagc 480
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cacgtcctca tctggatcca ctgcttcacc gtctacctgg tgccctgctc catcttcttc 600
atcttgaact caatcattgt gtacaagctc aggaggaaga gcaattttcg tctccgtggc 660
tactccacgg ggaagaccac cgccatcttg ttcaccatta cctccatctt tgccacactt 720
tgggcccccc gcatcatcat gattctttac cactctatg gggcgcccat ccagaaccgc 780
tggctggtac acatcatgtc cgacattgcc aacatgctag cccttctgaa cacagccatc 840
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aaggctttct tcaagtgcc gaagcaacct gtacagttct acaccaatca taacttttcc 960
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<210> 20

<211> 372

<212> PRT

<213> Homo sapiens

<400> 20

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Trp	Ser	Pro	Gly	Ser	Ala	Cys	Gly	Leu	Gly	Phe	Val	Pro	Val	Val	Tyr	
			20					25					30			
Tyr	Ser	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Pro	Ala	Asn	Ile	Leu	Thr	Val	
		35					40					45				
Ile	Ile	Leu	Ser	Gln	Leu	Val	Ala	Arg	Arg	Gln	Lys	Ser	Ser	Tyr	Asn	
	50					55					60					
Tyr	Leu	Leu	Ala	Leu	Ala	Ala	Ala	Asp	Ile	Leu	Val	Leu	Phe	Phe	Ile	
	65				70					75					80	
Val	Phe	Val	Asp	Phe	Leu	Leu	Glu	Asp	Phe	Ile	Leu	Asn	Met	Gln	Met	
				85					90					95		
Pro	Gln	Val	Pro	Asp	Lys	Ile	Ile	Glu	Val	Leu	Glu	Phe	Ser	Ser	Ile	
			100					105					110			
His	Thr	Ser	Ile	Trp	Ile	Thr	Val	Pro	Leu	Thr	Ile	Asp	Arg	Tyr	Ile	
		115					120					125				
Ala	Val	Cys	His	Pro	Leu	Lys	Tyr	His	Thr	Val	Ser	Tyr	Pro	Ala	Arg	
	130					135					140					
Thr	Arg	Lys	Val	Ile	Val	Ser	Val	Tyr	Ile	Thr	Cys	Phe	Leu	Thr	Ser	
	145				150					155					160	
Ile	Pro	Tyr	Tyr	Trp	Trp	Pro	Asn	Ile	Trp	Thr	Glu	Asp	Tyr	Ile	Ser	
				165					170					175		
Thr	Ser	Val	His	His	Val	Leu	Ile	Trp	Ile	His	Cys	Phe	Thr	Val	Tyr	
			180					185					190			
Leu	Val	Pro	Cys	Ser	Ile	Phe	Phe	Ile	Leu	Asn	Ser	Ile	Ile	Val	Tyr	
		195					200					205				
Lys	Leu	Arg	Arg	Lys	Ser	Asn	Phe	Arg	Leu	Arg	Gly	Tyr	Ser	Thr	Gly	
	210					215					220					
Lys	Thr	Thr	Ala	Ile	Leu	Phe	Thr	Ile	Thr	Ser	Ile	Phe	Ala	Thr	Leu	
	225				230					235					240	
Trp	Ala	Pro	Arg	Ile	Ile	Met	Ile	Leu	Tyr	His	Leu	Tyr	Gly	Ala	Pro	
				245					250					255		
Ile	Gln	Asn	Arg	Trp	Leu	Val	His	Ile	Met	Ser	Asp	Ile	Ala	Asn	Met	
			260					265					270			
Leu	Ala	Leu	Leu	Asn	Thr	Ala	Ile	Asn	Phe	Phe	Leu	Tyr	Cys	Phe	Ile	
		275					280					285				
Ser	Lys	Arg	Phe	Arg	Thr	Met	Ala	Ala	Ala	Thr	Leu	Lys	Ala	Phe	Phe	
	290					295					300					

Lys Cys Gln Lys Gln Pro Val Gln Phe Tyr Thr Asn His Asn Phe Ser
 305 310 315 320

Ile Thr Ser Ser Pro Trp Ile Ser Pro Ala Asn Ser His Cys Ile Lys
 325 330 335

Met Leu Val Tyr Gln Tyr Asp Lys Asn Gly Lys Pro Ile Lys Ser Arg
 340 345 350

Asn Asp Ser Lys Ser Ser Tyr Gln Phe Glu Asp Ala Ile Gly Ala Cys
 355 360 365

Val Ile Ile Leu
 370

<210> 21
 <211> 1343
 <212> DNA
 <213> Homo sapiens

<400> 21
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 cgacaagatc atagaagtgc tgggaattctc atccatccac acctccatat ggattactgt 360
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 ataccagcc cgcacccgga aagtcattgt aagtgtttac atcacctgct tcttgaccag 480
 catcccctat tactgggtggc ccaacatctg gactgaagac tacatcagca cctctgtgca 540
 tcacgtctc atctggatcc actgcttcac cgtctacctg gtgccctgct ccatcttctt 600
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 caaggctttc ttcaagtgcc agaagcaacc tgtacagttc tacaccaatc ataacttttc 960
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<210> 22
 <211> 353
 <212> PRT
 <213> Homo sapiens

<400> 22
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Trp	Ser	Pro	Gly	Ser	Ala	Cys	Gly	Leu	Gly	Phe	Val	Pro	Val	Val	Tyr	20	25	30
Tyr	Ser	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Pro	Ala	Asn	Ile	Leu	Thr	Val	35	40	45
Ile	Ile	Leu	Ser	Gln	Leu	Val	Ala	Arg	Arg	Gln	Lys	Ser	Ser	Tyr	Asn	50	55	60
Tyr	Leu	Leu	Ala	Leu	Ala	Ala	Ala	Asp	Ile	Leu	Val	Leu	Phe	Phe	Ile	65	70	75
Val	Phe	Val	Asp	Phe	Leu	Leu	Glu	Asp	Phe	Ile	Leu	Asn	Met	Gln	Met	85	90	95
Pro	Gln	Val	Pro	Asp	Lys	Ile	Ile	Glu	Val	Leu	Glu	Phe	Ser	Ser	Ile	100	105	110
His	Thr	Ser	Ile	Trp	Ile	Thr	Val	Pro	Leu	Thr	Ile	Asp	Arg	Tyr	Ile	115	120	125
Thr	Val	Cys	His	Pro	Leu	Lys	Tyr	His	Thr	Val	Ser	Tyr	Pro	Ala	Arg	130	135	140
Thr	Arg	Lys	Val	Ile	Val	Ser	Val	Tyr	Ile	Thr	Cys	Phe	Leu	Thr	Ser	145	150	155
Ile	Pro	Tyr	Tyr	Trp	Trp	Pro	Asn	Ile	Trp	Thr	Glu	Asp	Tyr	Ile	Ser	165	170	175
Thr	Ser	Val	His	His	Val	Leu	Ile	Trp	Ile	His	Cys	Phe	Thr	Val	Tyr	180	185	190
Leu	Val	Pro	Cys	Ser	Ile	Phe	Phe	Ile	Leu	Asn	Ser	Ile	Ile	Val	Tyr	195	200	205
Lys	Leu	Arg	Arg	Lys	Ser	Asn	Phe	Arg	Leu	Arg	Gly	Tyr	Ser	Thr	Gly	210	215	220
Lys	Thr	Thr	Ala	Ile	Leu	Phe	Thr	Ile	Thr	Ser	Ile	Phe	Ala	Thr	Leu	225	230	235
Trp	Ala	Pro	Arg	Ile	Ile	Met	Ile	Leu	Tyr	His	Leu	Tyr	Gly	Ala	Pro	245	250	255
Ile	Gln	Asn	Arg	Trp	Leu	Val	His	Ile	Met	Ser	Asp	Ile	Ala	Asn	Met	260	265	270
Leu	Ala	Leu	Leu	Asn	Thr	Ala	Ile	Asn	Phe	Phe	Leu	Tyr	Cys	Phe	Ile	275	280	285
Ser	Lys	Arg	Phe	Arg	Thr	Met	Ala	Ala	Ala	Thr	Leu	Lys	Ala	Phe	Phe	290	295	300
Lys	Cys	Gln	Lys	Gln	Pro	Val	Gln	Phe	Tyr	Thr	Asn	His	Asn	Phe	Ser	305	310	315

Ile Thr Ser Ser Pro Trp Ile Ser Pro Ala Asn Ser His Cys Ile Lys
 325 330 335

Met Leu Val Tyr Gln Tyr Asp Lys Asn Gly Lys Pro Ile Lys Val Ser
 340 345 350

Pro

<210> 23
 <211> 2392
 <212> DNA
 <213> Homo sapiens

<400> 23
 tcggcgcgag gattcagtgg atgaagagta cttattgcta gaatgttctt cctcatatga 60
 acttgacaac gttctgctct ctaattccat ttatttagct gtttcgaatt gatgaggatg 120
 cagcgaggag ctgccatctg tgaaatgggc cctcaccaga ctccgaatct gccagtatct 180
 tgctcttggg acttccagcc tccggaactg taaacacagc aacaaaaaag ttatgagaac 240
 caagagctct gagaaggctg ccaacgatga tcacagtgtc cgtgtggccc gtgaagatgt 300
 cagagagagt tgcccacctc ttggtctgga aaccttaaaa atcacagact tccagctcca 360
 tgctccacg gtgaagcgct atggcctggg ggcacatcga gggagactca acatccaggc 420
 gggcattaat gaaaatgatt tttatgacgg agcgtgggtc gcgggaagaa atgacctcca 480
 gcagtggatt gaagtggatg ctcggcgccct gaccagattc actggtgtca tcaactcaagg 540
 gaggaactcc ctctggctga gtgactgggt gacatcctat aaggtcatgg tgagcaatga 600
 cagccacacg tgggtcactg ttaagaatgg atctggagac atgatatttg agggaaacag 660
 tgagaaggag atccctgttc tcaatgagct acccgtcccc atggtggccc gctacatccg 720
 cataaaccct cagtcctggg ttgataatgg gagcatctgc atgagaatgg agatcctggg 780
 ctgcccactg ccagatccta ataattatta tcaccgcggg aacgagatga ccaccactga 840
 tgacctggat tttaagcacc acaattataa ggaaatgcgc caggtacagt tgatgaaagt 900
 tgtgaatgaa atgtgtccca atatcaccag aatttacaac attggaaaaa gccaccaggg 960
 cctgaagctg tatgtctgtg agatctcaga tcaccctggg gagcatgaag tcggtgagcc 1020
 cgagttccac tacatcgcgg gggcccacgg caatgagggt ctgggcccgg agctgctgct 1080
 gctgctgggt cagttcgtgt gtcaggagta cttggcccgg aatgcgcgca tcgtccacct 1140
 ggtggaggag acgcggtatc acgtcctccc ctccctcaac cccgatggct acgagaaggc 1200
 ctacgaaggg ggctcggagc tgggaggctg gtccctggga cgctggacct acgatggaat 1260
 tgacatcaac aacaactttc ctgatttaaa cacgctgctc tgggaggcag aggatcgaca 1320
 gaatgtcccc aggaaagttc ccaatcacta tattgcaatc cctgagtggg ttctgtcgga 1380
 aaatgccacg gtgggtggctg ccgagaccag agcagtcata gcctggatgg aaaaaatccc 1440
 ttttgtgctg ggcggcaacc tgcagggcgg cgagctgggt gtggcgtaac cctacgacct 1500
 ggtgcggtcc ccctggaaga cgcaggaaca cacccccacc cccgacgacc acgtgttccg 1560
 ctggctggcc tactcctatg cctccacaca ccgcctcatg acagacgccc ggaggagggt 1620
 gtgccacacg gaggacttcc aaaaggagga gggcactgtc aatggggcct cctggcacac 1680
 cgtcgctgga agtctgaacg atttcagcta ccttcataca aactgcttcg aactgtccat 1740
 ctacgtgggc tgtgataaat acccatatga gagccagctg cccgaggagt gggagaataa 1800
 ccgggaatct ctgatcgtgt tcatggagca gggtcatcgt ggcattaaag gcttgggtgag 1860
 agattcacat ggaaaaggaa tcccaaacgc cattatctcc gtagaaggca ttaaccatga 1920
 catccgaaca gccaacgatg gggattactg gcgcctcctg aaccctggag agtatgtggg 1980
 cacagcaaag gccgaagggt tcaactgcac caccaagaac tgtatgggtg gctatgacat 2040
 gggggccaca aggtgtgact tcacacttag caaaaccaac atggccagga tccgagagat 2100
 catggagaag tttgggaagc agcccgtcag cctgccagcc aggcggctga agctgcgggg 2160
 gcggaagaga cgacagcgtg ggtgaccctc ctgggcccct gagactcgtc tgggacctat 2220
 gcaaattaaa ccaacctggg agtagctcca tagtggactc actcactgtt gtttcctctg 2280
 taattcaaga agtgcctgga agagaggggt cattgtgagg caggtcccaa aagggaaggc 2340
 tggaggctga ggctgttttc ttttctttgt tcccatttat ccaaataact tg 2392

<210> 24
 <211> 650
 <212> PRT
 <213> Homo sapiens

<400> 24

Met	Arg	Thr	Lys	Ser	Ser	Glu	Lys	Ala	Ala	Asn	Asp	Asp	His	Ser	Val
1				5					10					15	
Arg	Val	Ala	Arg	Glu	Asp	Val	Arg	Glu	Ser	Cys	Pro	Pro	Leu	Gly	Leu
			20					25					30		
Glu	Thr	Leu	Lys	Ile	Thr	Asp	Phe	Gln	Leu	His	Ala	Ser	Thr	Val	Lys
		35					40					45			
Arg	Tyr	Gly	Leu	Gly	Ala	His	Arg	Gly	Arg	Leu	Asn	Ile	Gln	Ala	Gly
	50					55					60				
Ile	Asn	Glu	Asn	Asp	Phe	Tyr	Asp	Gly	Ala	Trp	Cys	Ala	Gly	Arg	Asn
65					70					75					80
Asp	Leu	Gln	Gln	Trp	Ile	Glu	Val	Asp	Ala	Arg	Arg	Leu	Thr	Arg	Phe
				85					90					95	
Thr	Gly	Val	Ile	Thr	Gln	Gly	Arg	Asn	Ser	Leu	Trp	Leu	Ser	Asp	Trp
			100					105					110		
Val	Thr	Ser	Tyr	Lys	Val	Met	Val	Ser	Asn	Asp	Ser	His	Thr	Trp	Val
		115					120					125			
Thr	Val	Lys	Asn	Gly	Ser	Gly	Asp	Met	Ile	Phe	Glu	Gly	Asn	Ser	Glu
	130					135					140				
Lys	Glu	Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	Val	Ala	Arg
145					150					155					160
Tyr	Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	Ser	Ile	Cys
				165					170					175	
Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	Asn	Asn	Tyr
			180					185					190		
Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	Asp	Phe	Lys
		195					200					205			
His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Val	Gln	Leu	Met	Lys	Val	Val
	210					215					220				
Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly	Lys	Ser
225					230					235					240
His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp	His	Pro	Gly
				245					250					255	
Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile	Ala	Gly	Ala	His
			260					265					270		

Gly Asn Glu Val Leu Gly Arg Glu Leu Leu Leu Leu Leu Val Gln Phe
 275 280 285
 Val Cys Gln Glu Tyr Leu Ala Arg Asn Ala Arg Ile Val His Leu Val
 290 295 300
 Glu Glu Thr Arg Ile His Val Leu Pro Ser Leu Asn Pro Asp Gly Tyr
 305 310 315 320
 Glu Lys Ala Tyr Glu Gly Gly Ser Glu Leu Gly Gly Trp Ser Leu Gly
 325 330 335
 Arg Trp Thr His Asp Gly Ile Asp Ile Asn Asn Asn Phe Pro Asp Leu
 340 345 350
 Asn Thr Leu Leu Trp Glu Ala Glu Asp Arg Gln Asn Val Pro Arg Lys
 355 360 365
 Val Pro Asn His Tyr Ile Ala Ile Pro Glu Trp Phe Leu Ser Glu Asn
 370 375 380
 Ala Thr Val Val Ala Ala Glu Thr Arg Ala Val Ile Ala Trp Met Glu
 385 390 395 400
 Lys Ile Pro Phe Val Leu Gly Gly Asn Leu Gln Gly Gly Glu Leu Val
 405 410 415
 Val Ala Tyr Pro Tyr Asp Leu Val Arg Ser Pro Trp Lys Thr Gln Glu
 420 425 430
 His Thr Pro Thr Pro Asp Asp His Val Phe Arg Trp Leu Ala Tyr Ser
 435 440 445
 Tyr Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg Arg Arg Val Cys
 450 455 460
 His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val Asn Gly Ala Ser
 465 470 475 480
 Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser Tyr Leu His Thr
 485 490 495
 Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp Lys Tyr Pro His
 500 505 510
 Glu Ser Gln Leu Pro Glu Glu Trp Glu Asn Asn Arg Glu Ser Leu Ile
 515 520 525
 Val Phe Met Glu Gln Val His Arg Gly Ile Lys Gly Leu Val Arg Asp
 530 535 540
 Ser His Gly Lys Gly Ile Pro Asn Ala Ile Ile Ser Val Glu Gly Ile
 545 550 555 560
 Asn His Asp Ile Arg Thr Ala Asn Asp Gly Asp Tyr Trp Arg Leu Leu
 565 570 575

Asn Pro Gly Glu Tyr Val Val Thr Ala Lys Ala Glu Gly Phe Thr Ala
580 585 590

Ser Thr Lys Asn Cys Met Val Gly Tyr Asp Met Gly Ala Thr Arg Cys
595 600 605

Asp Phe Thr Leu Ser Lys Thr Asn Met Ala Arg Ile Arg Glu Ile Met
610 615 620

Glu Lys Phe Gly Lys Gln Pro Val Ser Leu Pro Ala Arg Arg Leu Lys
625 630 635 640

Leu Arg Gly Arg Lys Arg Arg Gln Arg Gly
645 650

<210> 25
<211> 328
<212> DNA
<213> Homo sapiens

<400> 25
aaataagatt gaggaagctc ctgaagaagt cttatgtcct cccaagtact taaagctttc 60
acaaaaacac ccagaatcaa atactgctgg aatggacatc ttgccaaat tctctgcata 120
catcaagaat tcaaggccag aggttaatga agcattagt aagcatctct taaaaaccct 180
gcagaaaatg gaatatctga attctcctct ccctgatgaa attgatgaaa atagcatgca 240
ggacactaag ttttctacac ataaatttct gaatggcaat aaaatggcat tagctgattg 300
ccatctgctg cccaaactgc atattgtc 328

<210> 26
<211> 331
<212> DNA
<213> Homo sapiens

<400> 26
aaataagatt gaggaatttc ttgaagaagt cttatgcct cccaagtact taaagctttc 60
acaaaaacac ccagaatcaa atactgctgg aatggacatc ttgccaaat tctctgcata 120
tatcaagaat tcaaggccag aggctaata gaactggag aggggtctcc tgaaaaccct 180
gcagaaactg gatgaatata tgaattctcc tctccctgat gaaattgatg aaaatagtat 240
ggaggacata aagttttcta cacgtaaatt tctggatggc aatgaaatga cattagctga 300
ttgcaacctg ctgcccacac tgcattattgt c 331

<210> 27
<211> 247
<212> PRT
<213> Homo sapiens

<400> 27
Met Ala Leu Ser Met Pro Leu Asn Gly Leu Lys Glu Glu Asp Lys Glu
1 5 10 15

Pro Leu Ile Glu Leu Phe Val Lys Ala Gly Ser Asp Gly Glu Ser Ile
20 25 30

Gly Asn Cys Pro Phe Ser Gln Arg Leu Phe Met Ile Leu Trp Leu Lys
 35 40 45
 Gly Val Val Phe Ser Val Thr Thr Val Asp Leu Lys Arg Lys Pro Ala
 50 55 60
 Asp Leu Gln Asn Leu Ala Pro Gly Thr His Pro Pro Phe Ile Thr Phe
 65 70 75 80
 Asn Ser Glu Val Lys Thr Asp Val Asn Lys Ile Glu Glu Phe Leu Glu
 85 90 95
 Glu Val Leu Cys Pro Pro Lys Tyr Leu Lys Leu Ser Pro Lys His Pro
 100 105 110
 Glu Ser Asn Thr Ala Gly Met Asp Ile Phe Ala Lys Phe Ser Ala Tyr
 115 120 125
 Ile Lys Asn Ser Arg Pro Glu Ala Asn Glu Ala Leu Glu Arg Gly Leu
 130 135 140
 Leu Lys Thr Leu Gln Lys Leu Asp Glu Tyr Leu Asn Ser Pro Leu Pro
 145 150 155 160
 Asp Glu Ile Asp Glu Asn Ser Met Glu Asp Ile Lys Phe Ser Thr Arg
 165 170 175
 Arg Phe Leu Asp Gly Asp Glu Met Thr Leu Ala Asp Cys Asn Leu Leu
 180 185 190
 Pro Lys Leu His Ile Val Lys Val Val Ala Lys Lys Tyr Arg Asn Phe
 195 200 205
 Asp Ile Pro Lys Gly Met Thr Gly Ile Trp Arg Tyr Leu Thr Asn Ala
 210 215 220
 Tyr Ser Arg Asp Glu Phe Thr Asn Thr Cys Pro Ser Asp Lys Glu Val
 225 230 235 240
 Glu Ile Ala Tyr Ser Asp Val
 245

<210> 28

<211> 550

<212> DNA

<213> Homo sapiens

<400> 28

tctgaggaca cagccacact cttgtcatgc cattgccctt ctattctttc cttataacat 60
 catgtaagag ggcacagcat gtttcccatg ctggaccctg ctctgctcac tccacacacc 120
 ttctgacacc caccatggac actgttcagc aactggaaga aagagggcac ctgatggaca 180
 gcaaaggctt tgatgaataa taaatacatg aaggaactag gagtgggact agccctctgc 240
 gaaaaaaagg gtgctatggc caaaaaagat tgtattagct tttttgatgg caaaaacctc 300
 accataaaaaa tggagagtac tttaaaatca tacagttttc tcacactcag gggagggaaa 360
 ttcaaagaaa ctacaggtga cggcagaaaa actcagactg cacctttaca tatggcacat 420
 tggttcgaca tcagaagtgg aatggaaagg aaggcaaat aagaaaattg aaagacagga 480

aattagtggg ggactgcatc ataaacaatg tcacctgtac tcagatctat gaaaaagtag 540
aataaaaaact 550

<210> 29
<211> 136
<212> PRT
<213> Homo sapiens

<400> 29
Met Asp Thr Val Gln Gln Leu Glu Glu Arg Gly His Leu Met Asp Ser
1 5 10 15
Lys Gly Phe Asp Glu Asn Lys Tyr Met Lys Glu Leu Gly Val Gly Leu
20 25 30
Ala Leu Cys Glu Lys Lys Gly Ala Met Ala Lys Lys Asp Cys Ile Ser
35 40 45
Phe Phe Asp Gly Lys Asn Leu Thr Ile Lys Met Glu Ser Thr Leu Lys
50 55 60
Ser Tyr Ser Phe Leu Thr Leu Arg Gly Gly Lys Phe Lys Glu Thr Thr
65 70 75 80
Gly Asp Gly Arg Lys Thr Gln Thr Cys Thr Phe Thr Tyr Gly Thr Leu
85 90 95
Val Arg His Gln Lys Trp Asn Gly Lys Glu Gly Lys Ile Arg Lys Leu
100 105 110
Lys Asp Arg Lys Leu Val Val Asp Cys Ile Ile Asn Asn Val Thr Cys
115 120 125
Thr Gln Ile Tyr Glu Lys Val Glu
130 135

<210> 30
<211> 135
<212> PRT
<213> Homo sapiens

<400> 30
Met Ala Thr Val Gln Gln Leu Glu Gly Arg Trp Arg Leu Val Asp Ser
1 5 10 15
Lys Gly Phe Asp Glu Tyr Met Lys Glu Leu Gly Val Gly Ile Ala Leu
20 25 30
Arg Lys Met Gly Ala Met Ala Lys Pro Asp Cys Ile Ile Thr Cys Asp
35 40 45
Gly Lys Asn Leu Thr Ile Lys Thr Glu Ser Thr Leu Lys Thr Thr Gln
50 55 60
Phe Ser Cys Thr Leu Gly Glu Lys Phe Glu Glu Thr Thr Ala Asp Gly

65						70						75						80
Arg	Lys	Thr	Gln	Thr	Val	Cys	Asn	Phe	Thr	Asp	Gly	Ala	Leu	Val	Gln			
					85						90						95	
His	Gln	Glu	Trp	Asp	Gly	Lys	Glu	Ser	Thr	Ile	Thr	Arg	Lys	Leu	Lys			
					100						105						110	
Asp	Gly	Lys	Leu	Val	Val	Glu	Cys	Val	Met	Asn	Asn	Val	Thr	Cys	Thr			
					115						120						125	
Arg	Ile	Tyr	Glu	Lys	Val	Glu												
					130						135							

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<210> 32
<211> 512
<212> DNA
<213> Homo sapiens
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cgcggtctgga tgcggctgct agcggagggc gagggctgcg ctccctgccg gccagaagag 180
tgcgccgcgc cgcggggctg cctggcgggc aggggtgcgc acgcgtgcgg ctgctgctgg 240
gaatgcgcca acctcgaggg ccagctctgc gacctggacc ccagtgtca cttctacggg 300
cactgcggcg agcagcttga gtgccggctg gacacaggcg gcgacctgag ccgaggagag 360
gtgccggaac ctctgtgtgc ctgtcgttcg cagagtccgc tctgcgggtc cgacgggtcac 420
acctactccc agatctgccg cctgcaggag gcggcccgcg ctcgccccga tgccaacctc 480
actgtggcac acccggggcc ctgcgaatcg gg 512

```

<210> 33

<211> 512

<212> DNA

<213> Homo sapiens

<400> 33

```

atgtgtccgc cgccgcggcc cgcagctgcc ttggcgctgc ctgtgtcct gctactgctg 60
gtggtgctga cgccgcccc gaccggcgca aggccatccc caggcccaga ttacctgcgg 120
cgcggtctgga tgcggctgct agcggagggc gagggctgcg ctccctgccg gccagaagag 180
tgcgccgcgc cgcggggctg cctggcgggc aggggtgcgc acgcgtgcgg ctgctgctgg 240
gaatgcgcca acctcgaggg ccagctctgc gacctggacc ccagtgtca cttctacggg 300
cactgcggcg agcagcttga gtgccggctg gacacaggcg gcgacctgag ccgaggagag 360
gtgccggaac ctctgtgtgc ctgtcgttcg cagagtccgc tctgcgggtc cgacgggtcac 420
acctactccc agatctgccg cctgcaggag gcggcccgcg ctcgccccga tgccaacctc 480
actgtggcac acccggggcc ctgcgaatcg gg 512

```

<210> 34

<211> 304

<212> PRT

<213> Homo sapiens

<400> 34

```

Met Leu Pro Pro Pro Arg Pro Ala Ala Ala Leu Ala Leu Pro Val Leu
  1                      5                      10                      15

```

```

Leu Leu Leu Leu Val Val Leu Thr Pro Pro Pro Thr Gly Ala Arg Pro
      20                      25                      30

```

```

Ser Pro Gly Pro Asp Tyr Leu Arg Arg Gly Trp Met Arg Leu Leu Ala
      35                      40                      45

```

```

Glu Gly Glu Gly Cys Ala Pro Cys Arg Pro Glu Glu Cys Ala Ala Pro
      50                      55                      60

```

```

Arg Gly Cys Leu Ala Gly Arg Val Arg Asp Ala Cys Gly Cys Cys Trp
      65                      70                      75                      80

```

```

Glu Cys Ala Asn Leu Glu Gly Gln Leu Cys Asp Leu Asp Pro Ser Ala
      85                      90                      95

```

```

His Phe Tyr Gly His Cys Gly Glu Gln Leu Glu Cys Arg Leu Asp Thr
      100                      105                      110

```

```

Gly Gly Asp Leu Ser Arg Gly Glu Val Pro Glu Pro Leu Cys Ala Cys
      115                      120                      125

```

```

Arg Ser Gln Ser Pro Leu Cys Gly Ser Asp Gly His Thr Tyr Ser Gln

```

130	135	140
Ile Cys Arg Leu Gln Glu Ala Ala Arg Ala Arg Pro Asp Ala Asn Leu		
145	150	155 160
Thr Val Ala His Pro Gly Pro Cys Glu Ser Gly Pro Gln Ile Val Ser		
	165	170 175
His Pro Tyr Asp Thr Trp Asn Val Thr Gly Gln Asp Val Ile Phe Gly		
	180	185 190
Cys Glu Val Phe Ala Tyr Pro Met Ala Ser Ile Glu Trp Arg Lys Asp		
	195	200 205
Gly Leu Asp Ile Gln Leu Pro Gly Asp Asp Pro His Ile Ser Val Gln		
	210	215 220
Phe Arg Gly Gly Pro Gln Arg Phe Glu Val Thr Gly Trp Leu Gln Ile		
	225	230 235 240
Gln Ala Val Arg Pro Ser Asp Glu Gly Thr Tyr Arg Cys Leu Ala Arg		
	245	250 255
Asn Ala Leu Gly Gln Val Glu Ala Pro Ala Ser Leu Thr Val Leu Thr		
	260	265 270
Pro Asp Gln Leu Asn Ser Thr Gly Ile Pro Gln Leu Arg Ser Leu Asn		
	275	280 285
Leu Val Pro Glu Glu Glu Ala Glu Ser Glu Glu Asn Asp Asp Tyr Tyr		
	290	295 300

<210> 35
 <211> 1308
 <212> DNA
 <213> Homo sapiens

<400> 35
 cagcatgagc ttcaccactc gctccacctt ctccaccaac taccgggtccc tgggctctgt 60
 ccaggcgccc agctacggcg cccggccggt cagcagcgcg gccagcgtct atgcaggcgc 120
 tgggggctct gggtcccgga tctccgtgtc ccgctccacc agcttcaggg gcggcatggg 180
 gtccgggggc ctggccaccg ggatagccgg ggggtctggca ggaatgggag gcatccagaa 240
 cgagaaggag accatgcaaa gcctgaacga ccgcctggcc tcttacctgg acagagttag 300
 gagcctggag accgagaacc ggaggctgga gagcaaaatc cgggagcact tggagaagaa 360
 gggacccag gtcagagact ggagccatta cttcaagatc atcgaggacc tgagggtctca 420
 gatcttcgca aatactgtgg acaatgcccg catcgcttctg cagattgaca atgccgtct 480
 tgctgctgat gacttttagag tcaagtatga gacagagctg gccatgcgcc agtctgtgga 540
 gaacgacatc catgggctcc gcaaggatcat tgatgacacc aatatcacac gactgcagct 600
 ggagacagag atcgaggctc tcaaggagga gctgctcttc atgaagaaga accacgaaga 660
 ggaagtaaaa ggcctacaag cccagattgc cagctctggg ttgaccgtgg aggtagatgc 720
 ccccaaattc caggacctcg ccaagatcat ggcagacatc cgggccaat atgacgagct 780
 ggctcggaag aaccgagagg agctagacaa gtactggtct cagcagattg aggagagcac 840
 cacagtggctc accacacagt ctgctgaggt tggagctgct gagacgacgc tcacagagct 900

```

gagacgtaca gtccagtcct tggagatcga cctggactcc atgagaaatc tgaaggccag 960
cttggagaac agcctgaggg aggtggaggc ccgctacgcc ctacagatgg agcagctcaa 1020
cgggacacctg ctgcaccttg agtcagagct ggcacagacc cgggcagagg gacagcgcca 1080
ggcccaggag tatgaggccc tgctgaacat caaggtcaag ctggaggctg agatcgccac 1140
ctaccgccgc ctgctggaag atggcgagga ctttaatctt ggtgatgcct tggacagcag 1200
caactccatg caaaccatcc aaaagaccac caccgcggg atagtggatg gcaaagtggg 1260
gtctgagacc aatgacacca aagttctgag gcattaagcc agcagaag 1308

```

<210> 36

<211> 430

<212> PRT

<213> Homo sapiens

<400> 36

```

Met Ser Phe Thr Thr Arg Ser Thr Phe Ser Thr Asn Tyr Arg Ser Leu
  1                      5                      10          15

```

```

Gly Ser Val Gln Ala Pro Ser Tyr Gly Ala Arg Pro Val Ser Ser Ala
      20                      25          30

```

```

Ala Ser Val Tyr Ala Gly Ala Gly Gly Ser Gly Ser Arg Ile Ser Val
      35                      40          45

```

```

Ser Arg Ser Thr Ser Phe Arg Gly Gly Met Gly Ser Gly Gly Leu Ala
      50                      55          60

```

```

Thr Gly Ile Ala Gly Gly Leu Ala Gly Met Gly Gly Ile Gln Asn Glu
      65                      70          75          80

```

```

Lys Glu Thr Met Gln Ser Leu Asn Asp Arg Leu Ala Ser Tyr Leu Asp
      85                      90          95

```

```

Arg Val Arg Ser Leu Glu Thr Glu Asn Arg Arg Leu Glu Ser Lys Ile
      100                     105          110

```

```

Arg Glu His Leu Glu Lys Lys Gly Pro Gln Val Arg Asp Trp Ser His
      115                     120          125

```

```

Tyr Phe Lys Ile Ile Glu Asp Leu Arg Ala Gln Ile Phe Ala Asn Thr
      130                     135          140

```

```

Val Asp Asn Ala Arg Ile Val Leu Gln Ile Asp Asn Ala Arg Leu Ala
      145                     150          155          160

```

```

Ala Asp Asp Phe Arg Val Lys Tyr Glu Thr Glu Leu Ala Met Arg Gln
      165                     170          175

```

```

Ser Val Glu Asn Asp Ile His Gly Leu Arg Lys Val Ile Asp Asp Thr
      180                     185          190

```

```

Asn Ile Thr Arg Leu Gln Leu Glu Thr Glu Ile Glu Ala Leu Lys Glu
      195                     200          205

```

```

Glu Leu Leu Phe Met Lys Lys Asn His Glu Glu Glu Val Lys Gly Leu
      210                     215          220

```

Gln Ala Gln Ile Ala Ser Ser Gly Leu Thr Val Glu Val Asp Ala Pro
 225 230 235 240
 Lys Ser Gln Asp Leu Ala Lys Ile Met Ala Asp Ile Arg Ala Gln Tyr
 245 250 255
 Asp Glu Leu Ala Arg Lys Asn Arg Glu Glu Leu Asp Lys Tyr Trp Ser
 260 265 270
 Gln Gln Ile Glu Glu Ser Thr Thr Val Val Thr Thr Gln Ser Ala Glu
 275 280 285
 Val Gly Ala Ala Glu Thr Thr Leu Thr Glu Leu Arg Arg Thr Val Gln
 290 295 300
 Ser Leu Glu Ile Asp Leu Asp Ser Met Arg Asn Leu Lys Ala Ser Leu
 305 310 315 320
 Glu Asn Ser Leu Arg Glu Val Glu Ala Arg Tyr Ala Leu Gln Met Glu
 325 330 335
 Gln Leu Asn Gly Ile Leu Leu His Leu Glu Ser Glu Leu Ala Gln Thr
 340 345 350
 Arg Ala Glu Gly Gln Arg Gln Ala Gln Glu Tyr Glu Ala Leu Leu Asn
 355 360 365
 Ile Lys Val Lys Leu Glu Ala Glu Ile Ala Thr Tyr Arg Arg Leu Leu
 370 375 380
 Glu Asp Gly Glu Asp Phe Asn Leu Gly Asp Ala Leu Asp Ser Ser Asn
 385 390 395 400
 Ser Met Gln Thr Ile Gln Lys Thr Thr Thr Arg Arg Ile Val Asp Gly
 405 410 415
 Lys Val Val Ser Glu Thr Asn Asp Thr Lys Val Leu Arg His
 420 425 430

<210> 37

<211> 722

<212> PRT

<213> Mus musculus

<400> 37

Met Trp Gly Leu Leu Leu Ala Val Thr Ala Phe Ala Pro Ser Val Gly
 1 5 10 15
 Leu Gly Leu Gly Ala Pro Ser Ala Ser Val Pro Gly Leu Ala Pro Gly
 20 25 30
 Ser Thr Leu Ala Pro His Ser Ser Val Ala Gln Pro Ser Thr Lys Ala
 35 40 45
 Asn Glu Thr Ser Glu Arg His Val Arg Leu Arg Val Ile Lys Lys Lys
 50 55 60

Lys Ile Val Val Lys Lys Arg Lys Lys Leu Arg His Pro Gly Pro Leu
 65 70 75 80
 Gly Thr Ala Arg Pro Val Val Pro Thr His Pro Ala Lys Thr Leu Thr
 85 90 95
 Leu Pro Glu Lys Gln Glu Pro Gly Cys Pro Pro Leu Gly Leu Glu Ser
 100 105 110
 Leu Arg Val Ser Asp Ser Gln Leu Glu Ala Ser Ser Ser Gln Ser Phe
 115 120 125
 Gly Leu Gly Ala His Arg Gly Arg Leu Asn Ile Gln Ser Gly Leu Glu
 130 135 140
 Asp Gly Asp Leu Tyr Asp Gly Ala Trp Cys Ala Glu Gln Gln Asp Thr
 145 150 155 160
 Glu Pro Trp Leu Gln Val Asp Ala Lys Asn Pro Val Arg Phe Ala Gly
 165 170 175
 Ile Val Thr Gln Gly Arg Asn Ser Val Trp Arg Tyr Asp Trp Val Thr
 180 185 190
 Ser Phe Lys Val Gln Phe Ser Asn Asp Ser Gln Thr Trp Trp Lys Ser
 195 200 205
 Arg Asn Ser Thr Gly Met Asp Ile Val Phe Pro Ala Asn Ser Asp Ala
 210 215 220
 Glu Thr Pro Val Leu Asn Leu Leu Pro Glu Pro Gln Val Ala Arg Phe
 225 230 235 240
 Ile Arg Leu Leu Pro Gln Thr Trp Phe Gln Gly Gly Val Pro Cys Leu
 245 250 255
 Arg Ala Glu Ile Leu Ala Cys Pro Val Ser Asp Pro Asn Asp Leu Phe
 260 265 270
 Pro Glu Ala His Thr Leu Gly Ser Ser Asn Ser Leu Asp Phe Arg His
 275 280 285
 His Asn Tyr Lys Ala Met Arg Lys Leu Met Lys Gln Val Asn Glu Gln
 290 295 300
 Cys Pro Asn Ile Thr Arg Ile Tyr Ser Ile Gly Lys Ser His Gln Gly
 305 310 315 320
 Leu Lys Leu Tyr Val Met Glu Met Ser Asp His Pro Gly Glu His Glu
 325 330 335
 Leu Gly Glu Pro Glu Val Arg Tyr Val Ala Gly Met His Gly Asn Glu
 340 345 350
 Ala Leu Gly Arg Glu Leu Leu Leu Leu Leu Met Gln Phe Leu Cys His
 355 360 365

Glu	Phe	Leu	Arg	Gly	Asp	Pro	Arg	Val	Thr	Arg	Leu	Leu	Thr	Glu	Thr	370	375	380	
Arg	Ile	His	Leu	Leu	Pro	Ser	Met	Asn	Pro	Asp	Gly	Tyr	Glu	Thr	Ala	385	390	395	400
Tyr	His	Arg	Gly	Ser	Glu	Leu	Val	Gly	Trp	Ala	Glu	Gly	Arg	Trp	Thr	405	410	415	
His	Gln	Gly	Ile	Asp	Leu	Asn	His	Asn	Phe	Ala	Asp	Leu	Asn	Thr	Gln	420	425	430	
Leu	Trp	Tyr	Ala	Glu	Asp	Asp	Gly	Leu	Val	Pro	Asp	Thr	Val	Pro	Asn	435	440	445	
His	His	Leu	Pro	Leu	Pro	Thr	Tyr	Tyr	Thr	Leu	Pro	Asn	Ala	Thr	Val	450	455	460	
Ala	Pro	Glu	Thr	Trp	Ala	Val	Ile	Lys	Trp	Met	Lys	Arg	Ile	Pro	Phe	465	470	475	480
Val	Leu	Ser	Ala	Asn	Leu	His	Gly	Gly	Glu	Leu	Val	Val	Ser	Tyr	Pro	485	490	495	
Phe	Asp	Met	Thr	Arg	Thr	Pro	Trp	Ala	Ala	Arg	Glu	Leu	Thr	Pro	Thr	500	505	510	
Pro	Asp	Asp	Ala	Val	Phe	Arg	Trp	Leu	Ser	Thr	Val	Tyr	Ala	Gly	Thr	515	520	525	
Asn	Arg	Ala	Met	Gln	Asp	Thr	Asp	Arg	Arg	Pro	Cys	His	Ser	Gln	Asp	530	535	540	
Phe	Ser	Leu	His	Gly	Asn	Val	Ile	Asn	Gly	Ala	Asp	Trp	His	Thr	Val	545	550	555	560
Pro	Gly	Ser	Met	Asn	Asp	Phe	Ser	Tyr	Leu	His	Thr	Asn	Cys	Phe	Glu	565	570	575	
Val	Thr	Val	Glu	Leu	Ser	Cys	Asp	Lys	Phe	Pro	His	Glu	Lys	Glu	Leu	580	585	590	
Pro	Gln	Glu	Trp	Glu	Asn	Asn	Lys	Asp	Ala	Leu	Leu	Thr	Tyr	Leu	Glu	595	600	605	
Gln	Val	Arg	Met	Gly	Ile	Thr	Gly	Val	Val	Arg	Asp	Lys	Asp	Thr	Glu	610	615	620	
Leu	Gly	Ile	Ala	Asp	Ala	Val	Ile	Ala	Val	Glu	Gly	Ile	Asn	His	Asp	625	630	635	640
Val	Thr	Thr	Ala	Trp	Gly	Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Thr	Pro	Gly	645	650	655	
Asp	Tyr	Val	Val	Thr	Ala	Ser	Ala	Glu	Gly	Tyr	His	Thr	Val	Arg	Gln	660	665	670	

His Cys Gln Val Thr Phe Glu Glu Gly Pro Val Pro Cys Asn Phe Leu
675 680 685

Leu Thr Lys Thr Pro Lys Glu Arg Leu Arg Glu Leu Leu Ala Thr Arg
690 695 700

Gly Lys Leu Pro Pro Asp Leu Arg Arg Lys Leu Glu Arg Leu Arg Gly
705 710 715 720

Gln Lys

<210> 38
<211> 734
<212> PRT
<213> Homo sapiens

<400> 38
Met Trp Gly Leu Leu Leu Ala Leu Ala Ala Phe Ala Pro Ala Val Gly
1 5 10 15

Pro Ala Leu Gly Ala Pro Arg Asn Ser Val Leu Gly Leu Ala Gln Pro
20 25 30

Gly Thr Thr Lys Val Pro Gly Ser Thr Pro Ala Leu His Ser Ser Pro
35 40 45

Ala Gln Pro Pro Ala Glu Thr Ala Asn Gly Thr Ser Glu Gln His Val
50 55 60

Arg Ile Arg Val Ile Lys Lys Lys Lys Val Ile Met Lys Lys Arg Lys
65 70 75 80

Lys Leu Thr Leu Thr Arg Pro Thr Pro Leu Val Thr Ala Gly Pro Leu
85 90 95

Val Thr Pro Thr Pro Ala Gly Thr Leu Asp Pro Ala Glu Lys Gln Glu
100 105 110

Thr Gly Cys Pro Pro Leu Gly Leu Glu Ser Leu Arg Val Ser Asp Ser
115 120 125

Arg Leu Glu Ala Ser Ser Ser Gln Ser Phe Gly Leu Gly Pro His Arg
130 135 140

Gly Arg Leu Asn Ile Gln Ser Gly Leu Glu Asp Gly Asp Leu Tyr Asp
145 150 155 160

Gly Ala Trp Cys Ala Glu Glu Gln Asp Ala Asp Pro Trp Phe Gln Val
165 170 175

Asp Ala Gly His Pro Thr Arg Phe Ser Gly Val Ile Thr Gln Gly Arg
180 185 190

Asn Ser Val Trp Arg Tyr Asp Trp Val Thr Ser Tyr Lys Val Gln Phe

195					200					205					
Ser	Asn	Asp	Ser	Arg	Thr	Trp	Trp	Gly	Ser	Arg	Asn	His	Ser	Ser	Gly
210						215					220				
Met	Asp	Ala	Val	Phe	Pro	Ala	Asn	Ser	Asp	Pro	Glu	Thr	Pro	Val	Leu
225					230				235						240
Asn	Leu	Leu	Pro	Glu	Pro	Gln	Val	Ala	Arg	Phe	Ile	Arg	Leu	Leu	Pro
				245					250					255	
Gln	Thr	Trp	Leu	Gln	Gly	Gly	Ala	Pro	Cys	Leu	Arg	Ala	Glu	Ile	Leu
			260					265					270		
Ala	Cys	Pro	Val	Ser	Asp	Pro	Asn	Asp	Leu	Phe	Leu	Glu	Ala	Pro	Ala
		275					280					285			
Ser	Gly	Ser	Ser	Asp	Pro	Leu	Asp	Phe	Gln	His	His	Asn	Tyr	Lys	Ala
290						295					300				
Met	Arg	Lys	Leu	Met	Lys	Gln	Val	Gln	Glu	Gln	Cys	Pro	Asn	Ile	Thr
305					310					315					320
Arg	Ile	Tyr	Ser	Ile	Gly	Lys	Ser	Tyr	Gln	Gly	Leu	Lys	Leu	Tyr	Val
				325					330					335	
Met	Glu	Met	Ser	Asp	Lys	Pro	Gly	Glu	His	Glu	Leu	Gly	Glu	Pro	Glu
			340					345					350		
Val	Arg	Tyr	Val	Ala	Gly	Met	His	Gly	Asn	Glu	Ala	Leu	Gly	Arg	Glu
		355					360					365			
Leu	Leu	Leu	Leu	Leu	Met	Gln	Phe	Leu	Cys	His	Glu	Phe	Leu	Arg	Gly
370						375					380				
Asn	Pro	Gln	Val	Thr	Arg	Leu	Leu	Ser	Glu	Met	Arg	Ile	His	Leu	Leu
385					390					395					400
Pro	Ser	Met	Asn	Pro	Asp	Gly	Tyr	Glu	Ile	Ala	Tyr	His	Arg	Gly	Ser
				405					410					415	
Glu	Leu	Val	Gly	Trp	Ala	Glu	Gly	Arg	Trp	Asn	Asn	Gln	Ser	Ile	Asp
			420					425					430		
Leu	Asn	His	Asn	Phe	Ala	Asp	Leu	Asn	Thr	Pro	Leu	Trp	Glu	Ala	Gln
		435					440					445			
Asp	Asp	Gly	Lys	Val	Pro	His	Ile	Val	Pro	Asn	His	His	Leu	Pro	Leu
	450					455					460				
Pro	Thr	Tyr	Tyr	Thr	Leu	Pro	Asn	Ala	Thr	Val	Ala	Pro	Glu	Thr	Arg
465					470					475					480
Ala	Val	Ile	Lys	Trp	Met	Lys	Arg	Ile	Pro	Phe	Val	Leu	Ser	Ala	Asn
				485					490					495	
Leu	His	Gly	Gly	Glu	Leu	Val	Val	Ser	Tyr	Pro	Phe	Asp	Met	Thr	Arg

500					505					510						
Thr	Pro	Trp	Ala	Ala	Arg	Glu	Leu	Thr	Pro	Thr	Pro	Asp	Asp	Ala	Val	
515					520					525						
Phe	Arg	Trp	Leu	Ser	Thr	Val	Tyr	Ala	Gly	Ser	Asn	Leu	Ala	Met	Gln	
530					535					540						
Asp	Thr	Ser	Arg	Arg	Pro	Cys	His	Ser	Gln	Asp	Phe	Ser	Val	His	Gly	
545					550					555					560	
Asn	Ile	Ile	Asn	Gly	Ala	Asp	Trp	His	Thr	Val	Pro	Gly	Ser	Met	Asn	
565					570					575						
Asp	Phe	Ser	Tyr	Leu	His	Thr	Asn	Cys	Phe	Glu	Val	Thr	Val	Glu	Leu	
580					585					590						
Ser	Cys	Asp	Lys	Phe	Pro	His	Glu	Asn	Glu	Leu	Pro	Gln	Glu	Trp	Glu	
595					600					605						
Asn	Asn	Lys	Asp	Ala	Leu	Leu	Thr	Tyr	Leu	Glu	Gln	Val	Arg	Met	Gly	
610					615					620						
Ile	Ala	Gly	Val	Val	Arg	Asp	Lys	Asp	Thr	Glu	Leu	Gly	Ile	Ala	Asp	
625					630					635					640	
Ala	Val	Ile	Ala	Val	Asp	Gly	Ile	Asn	His	Asp	Val	Thr	Thr	Ala	Trp	
645					650					655						
Gly	Gly	Asp	Tyr	Trp	Arg	Leu	Leu	Thr	Pro	Gly	Asp	Tyr	Met	Val	Thr	
660					665					670						
Ala	Ser	Ala	Glu	Gly	Tyr	His	Ser	Val	Thr	Arg	Asn	Cys	Arg	Val	Thr	
675					680					685						
Phe	Glu	Glu	Gly	Pro	Phe	Pro	Cys	Asn	Phe	Val	Leu	Thr	Lys	Thr	Pro	
690					695					700						
Lys	Gln	Arg	Leu	Arg	Glu	Leu	Leu	Ala	Ala	Gly	Ala	Lys	Val	Pro	Pro	
705					710					715					720	
Asp	Leu	Arg	Arg	Arg	Leu	Glu	Arg	Leu	Arg	Gly	Gln	Lys	Asp			
725					730											

<210> 39

<211> 267

<212> DNA

<213> Homo sapiens

<400> 39

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ggaaggacac cgacccgtcc atctaccgga tccacgctgg ggacgtgtat ctctacgggg 60
gccgggggct gctgaacgtc agccggatca tcgtccaccc caactatgtc actgcggggc 120
tggtgctgga tgtggccctg ctccagctgg tgagcccat gatcggagcc gctaattgca 180
ggacgggtcaa gctctccccg gtctcgctgg agtcacccc gaaggaccag tgctgggtga 240
ctggctgggg agcgatcagg atgttcg                                267

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<210> 40
 <211> 267
 <212> DNA
 <213> Homo sapiens

<400> 40
 ggaaggacac cgacccgtcc atctaccgga tccacgctgg ggacgtgtat ctctacgggg 60
 gccgggggct gctgaacgtc agccggatca tcgtccaccc caactatgtc actgcggggc 120
 tgggtgcgga tgtggccctg ctccagctgg tgagcccat gatctgagcc gctaattgtca 180
 ggacggtcaa gctctccccg gtctcgctgg agtcacccc gaaggaccag tgctgggtga 240
 ctggctgggg agcgatcagg atgttcg 267

<210> 41
 <211> 255
 <212> PRT
 <213> Homo sapiens

<400> 41
 Pro Val Pro Glu Asn Asp Leu Val Gly Ile Val Gly Gly His Asn Ala
 1 5 10 15
 Pro Pro Gly Lys Trp Pro Trp Gln Val Ser Leu Arg Val Tyr Ser Tyr
 20 25 30
 His Trp Ala Ser Trp Ala His Ile Cys Gly Gly Ser Leu Ile His Pro
 35 40 45
 Gln Trp Val Leu Thr Ala Ala His Cys Ile Phe Trp Lys Asp Thr Asp
 50 55 60
 Pro Ser Ile Tyr Arg Ile His Ala Gly Asp Val Tyr Leu Tyr Gly Gly
 65 70 75 80
 Arg Gly Leu Leu Asn Val Ser Arg Ile Ile Val His Pro Asn Tyr Val
 85 90 95
 Thr Ala Gly Leu Gly Ala Asp Val Ala Leu Leu Gln Leu Val Ser Pro
 100 105 110
 Met Ile Gly Ala Ala Asn Val Arg Thr Val Lys Leu Ser Pro Val Ser
 115 120 125
 Leu Glu Leu Thr Pro Lys Asp Gln Cys Trp Val Thr Gly Trp Gly Ala
 130 135 140
 Ile Arg Met Phe Glu Ser Leu Pro Pro Pro Tyr Arg Leu Gln Gln Ala
 145 150 155 160
 Ser Val Gln Val Leu Glu Asn Ala Val Cys Glu Gln Pro Tyr Arg Asn
 165 170 175
 Ala Ser Gly His Thr Gly Asp Arg Gln Leu Ile Leu Asp Asp Met Leu
 180 185 190
 Cys Ala Gly Ser Glu Gly Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly

195	200	205
Pro Leu Val Cys Arg Leu Arg Gly Ser Trp Arg Leu Val Gly Val Val		
210	215	220
Ser Trp Gly Tyr Gly Cys Thr Leu Arg Asp Phe Pro Gly Val Tyr Thr		
225	230	235 240
His Val Gln Ile Tyr Val Leu Trp Ile Leu Gln Gln Val Gly Glu		
	245	250 255

<210> 42
 <211> 252
 <212> PRT
 <213> Mus musculus

<400> 42
Pro Arg Pro Ala Asn Gln Arg Val Gly Ile Val Gly Gly His Glu Ala
1 5 10 15
Ser Glu Ser Lys Trp Pro Trp Gln Val Ser Leu Arg Phe Lys Leu Asn
20 25 30
Tyr Trp Ile His Phe Cys Gly Gly Ser Leu Ile His Pro Gln Trp Val
35 40 45
Leu Thr Ala Ala His Cys Val Gly Pro His Ile Lys Ser Pro Gln Leu
50 55 60
Phe Arg Val Gln Leu Arg Glu Gln Tyr Leu Tyr Tyr Gly Asp Gln Leu
65 70 75 80
Leu Ser Leu Asn Arg Ile Val Val His Pro His Tyr Tyr Thr Ala Glu
85 90 95
Gly Gly Ala Asp Val Ala Leu Leu Glu Leu Glu Val Pro Val Asn Val
100 105 110
Ser Thr His Ile His Pro Ile Ser Leu Pro Pro Ala Ser Glu Thr Phe
115 120 125
Pro Pro Gly Thr Ser Cys Trp Val Thr Gly Trp Gly Asp Ile Asp Asn
130 135 140
Asp Glu Pro Leu Pro Pro Pro Tyr Pro Leu Lys Gln Val Lys Val Pro
145 150 155 160
Ile Val Glu Asn Ser Leu Cys Asp Arg Lys Tyr His Thr Gly Leu Tyr
165 170 175
Thr Gly Asp Asp Phe Pro Ile Val His Asp Gly Met Leu Cys Ala Gly
180 185 190
Asn Thr Arg Arg Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val
195 200 205

Cys Lys Val Lys Gly Thr Trp Leu Gln Ala Gly Val Val Ser Trp Gly
 210 215 220

Glu Gly Cys Ala Gln Pro Asn Lys Pro Gly Ile Tyr Thr Arg Val Thr
 225 230 235 240

Tyr Tyr Leu Asp Trp Ile His Arg Tyr Val Pro Glu
 245 250

<210> 43

<211> 278

<212> PRT

<213> Homo sapiens

<400> 43

Met Leu Trp Leu Leu Phe Leu Thr Leu Pro Cys Leu Gly Gly Ser Met
 1 5 10 15

Ser Lys Thr Pro Val Pro Val Pro Glu Asn Asp Leu Val Gly Ile Val
 20 25 30

Gly Gly His Asn Ala Pro Pro Gly Lys Trp Pro Trp Gln Val Ser Leu
 35 40 45

Arg Val Tyr Ser Tyr His Trp Ala Ser Trp Ala His Ile Cys Gly Gly
 50 55 60

Ser Leu Ile His Pro Gln Trp Val Leu Thr Ala Ala His Cys Ile Phe
 65 70 75 80

Trp Lys Asp Thr Asp Pro Ser Ile Tyr Arg Ile His Ala Gly Asp Val
 85 90 95

Tyr Leu Tyr Gly Gly Arg Gly Leu Leu Asn Val Ser Arg Ile Ile Val
 100 105 110

His Pro Asn Tyr Val Thr Ala Gly Leu Gly Ala Asp Val Ala Leu Leu
 115 120 125

Gln Leu Val Ser Pro Met Ile Gly Ala Ala Asn Val Arg Thr Val Lys
 130 135 140

Leu Ser Pro Val Ser Leu Glu Leu Thr Pro Lys Asp Gln Cys Trp Val
 145 150 155 160

Thr Gly Trp Gly Ala Ile Arg Met Phe Glu Ser Leu Pro Pro Pro Tyr
 165 170 175

Arg Leu Gln Gln Ala Ser Val Gln Val Leu Glu Asn Ala Val Cys Glu
 180 185 190

Gln Pro Tyr Arg Asn Ala Ser Gly His Thr Gly Asp Arg Gln Leu Ile
 195 200 205

Leu Asp Asp Met Leu Cys Ala Gly Ser Glu Gly Arg Asp Ser Cys Gln
 210 215 220

Gly Asp Ser Gly Gly Pro Leu Val Cys Arg Leu Arg Gly Ser Trp Arg
 225 230 235 240

Leu Val Gly Val Val Ser Trp Gly Tyr Gly Cys Thr Leu Arg Asp Phe
 245 250 255

Pro Gly Val Tyr Thr His Val Gln Ile Tyr Val Leu Trp Ile Leu Gln
 260 265 270

Gln Val Gly Glu Leu Pro
 275

<210> 44
 <211> 275
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Leu Asn Leu Leu Leu Leu Ala Leu Pro Val Leu Ala Ser Arg Ala
 1 5 10 15

Tyr Ala Ala Pro Ala Pro Gly Gln Ala Leu Gln Arg Val Gly Ile Val
 20 25 30

Gly Gly Gln Glu Ala Pro Arg Ser Lys Trp Pro Trp Gln Val Ser Leu
 35 40 45

Arg Val His Gly Pro Tyr Trp Met His Phe Cys Gly Gly Ser Leu Ile
 50 55 60

His Pro Gln Trp Val Leu Thr Ala Ala His Cys Val Gly Pro Asp Val
 65 70 75 80

Lys Asp Leu Ala Ala Leu Arg Val Gln Leu Arg Glu Gln His Leu Tyr
 85 90 95

Tyr Gln Asp Gln Leu Leu Pro Val Ser Arg Ile Ile Val His Pro Gln
 100 105 110

Phe Tyr Thr Ala Gln Ile Gly Ala Asp Ile Ala Leu Leu Glu Leu Glu
 115 120 125

Glu Pro Val Lys Val Ser Ser His Val His Thr Val Thr Leu Pro Pro
 130 135 140

Ala Ser Glu Thr Phe Pro Pro Gly Met Pro Cys Trp Val Thr Gly Trp
 145 150 155 160

Gly Asp Val Asp Asn Asp Glu Arg Leu Pro Pro Pro Phe Pro Leu Lys
 165 170 175

Gln Val Lys Val Pro Ile Met Glu Asn His Ile Cys Asp Ala Lys Tyr
 180 185 190

His Leu Gly Ala Tyr Thr Gly Asp Asp Val Arg Ile Val Arg Asp Asp

195 200 205

Met Leu Cys Ala Gly Asn Thr Arg Arg Asp Ser Cys Gln Gly Asp Ser
210 215 220

Gly Gly Pro Leu Val Cys Lys Val Asn Gly Thr Trp Leu Gln Ala Gly
225 230 235 240

Val Val Ser Trp Gly Glu Gly Cys Ala Gln Pro Asn Arg Pro Gly Ile
245 250 255

Tyr Thr Arg Val Thr Tyr Tyr Leu Asp Trp Ile His His Tyr Val Pro
260 265 270

Lys Lys Pro
275

<210> 45
<211> 1170
<212> DNA
<213> Homo sapiens

<400> 45

caggtcggcc	acgggacctg	acgcaacagg	atggacgagt	cccctgagcc	tctgcagcag	60
ggcagagggc	cggtgccggt	ccgacgccag	cgcccagcac	cccgggggtct	gcgtgagatg	120
ctgaaggcca	ggctgtggtg	cagctgctcg	tgcagtgtgc	tgtgcgtccg	ggcgtggtg	180
caggacctgc	tccccgccac	gcgctggctg	cgtcagtacc	gcccgcggga	gtacctggca	240
ggcgacgtca	tgtctgggct	ggtcatcggc	atcatcctgg	tcccgcaggc	catcgcctac	300
tcattgctgg	ccgggctgca	gcccattctac	agcctctata	cgtccttctt	cgccaacctc	360
atctacttcc	tcatgggcac	ctcacggcat	gtctccgtgg	gcattcttcag	cctgctttgc	420
ctcatgggtg	ggcaggtggt	ggaccgggag	ctccagctgg	ccggctttga	cccctcccag	480
gacggcctgc	agcccggagc	caacagcagc	accctcaacg	gctcggctgc	catgctggac	540
tgcgggcgtg	actgctacgc	catccgtgtc	gccaccgccc	tcacgctgat	gaccgggctt	600
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ctgctgggcg	tgcggatccc	gcggcaccag	gggcccggca	tgggtggctc	cacatggctg	780
agcctgctgc	gcggcgcccg	gcaggccaac	gtgtgcgacg	tggtcaccag	cacggtgtgc	840
ctggcggtgc	tgctagccgc	gaaggagctc	tcagaccgct	accgacaccg	cctgaggggtg	900
ccgctgcccc	cggagctgct	ggtcacgtg	gtggccacac	tcgtgtcgca	cttcggggcag	960
ctccacaagc	gctttggctc	gagcgtggct	ggcgacatcc	ccacgggttt	catgccccct	1020
caggtcccag	agcccaggct	gatgcagcgt	gtggctttgg	atgccgtggc	cctggccctc	1080
gtggctgccg	ccttctccat	ctcgctggcg	gagatgttcg	cccgcagtca	cggctactct	1140
gtgcgtgccca	accaggagct	gctggctgtg				1170

<210> 46
<211> 1170
<212> DNA
<213> Homo sapiens

<400> 46

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ggcagagggc	cggtgccggt	ccgacggcag	cgcccagcac	cccgggggtct	gcgtgagatg	120
ctgaaggcca	ggctgtggtg	cagctgctcg	tgcagtgtgc	tgtgcgtccg	ggcgtggtg	180
caggacctgc	tccccgccac	gcgctggctg	cgtcagtacc	gcccgcggga	gtacctggca	240
ggcgacgtca	tgtctgggct	ggtcatcggc	atcatcctgg	tgccgcaggc	catcgcctac	300

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tcattgctgg ccgggctgca gcccatctac agcctctata cgtccttctt cgccaacctc 360
atctacttcc tcatggggcac ctcacggcat gtctccgtgg gcattcttcag cctgctttgc 420
ctcatgggtgg ggcaggtggg ggaccgggag ctccagctgg ccggctttga cccctcccag 480
gacggcctgc agcccgagc caacagcagc accctcaacg gctcggctgc catgctggac 540
tgccggcgctg actgctacgc catcctgtgc gccaccgccc tcacgctgat gaccgggctt 600
taccaggtcc tcatggggcgt cctccggctg ggcttcgtgt ccgcctacct ctcacagcca 660
ctgctcgatg gctttgccat gggggcctcc gtgaccatcc tgacctcgca gctcaaacac 720
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agcctgctgc gcggcgccgg gcaggccaac gtgtgcgacg tggtcaccag cacggtgtgc 840
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ccgctgcccc cggagctgct ggtcatcgtg gtggccacac tcgtgtcgca cttcgggcag 960
ctccacaagc gctttggctc gagcgtggct ggcgacatcc ccacgggttt catgccccct 1020
caggtcccag agcccaggct gatgcagcgt gtggctttgg atgccgtggc cctggccctc 1080
gtggctgccg ccttctccat ctcgctggcg gagatgttcg cccgcagtca cggctactct 1140
gtgcgtgccca accaggagct gctggctgtg 1170

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<210> 47

<211> 434

<212> PRT

<213> Homo sapiens

<400> 47

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Met Asp Glu Ser Pro Glu Pro Leu Gln Gln Gly Arg Gly Pro Val Pro
  1              5              10              15

```

```

Val Arg Arg Gln Arg Pro Ala Pro Arg Gly Leu Arg Glu Met Leu Lys
      20              25              30

```

```

Ala Arg Leu Trp Cys Ser Cys Ser Cys Ser Val Leu Cys Val Arg Ala
    35              40              45

```

```

Leu Val Gln Asp Leu Leu Pro Ala Thr Arg Trp Leu Arg Gln Tyr Arg
    50              55              60

```

```

Pro Arg Glu Tyr Leu Ala Gly Asp Val Met Ser Gly Leu Val Ile Gly
    65              70              75              80

```

```

Ile Ile Leu Val Pro Gln Ala Ile Ala Tyr Ser Leu Leu Ala Gly Leu
      85              90              95

```

```

Gln Pro Ile Tyr Ser Leu Tyr Thr Ser Phe Phe Ala Asn Leu Ile Tyr
    100             105             110

```

```

Phe Leu Met Gly Thr Ser Arg His Val Ser Val Gly Ile Phe Ser Leu
    115             120             125

```

```

Leu Cys Leu Met Val Gly Gln Val Val Asp Arg Glu Leu Gln Leu Ala
    130             135             140

```

```

Gly Phe Asp Pro Ser Gln Asp Gly Leu Gln Pro Gly Ala Asn Ser Ser
    145             150             155             160

```

```

Thr Leu Asn Gly Ser Ala Ala Met Leu Asp Cys Gly Arg Asp Cys Tyr
    165             170             175

```

```

Ala Ile Arg Val Ala Thr Ala Leu Thr Leu Met Thr Gly Leu Tyr Gln

```

180				185				190							
Val	Leu	Met	Gly	Val	Leu	Arg	Leu	Gly	Phe	Val	Ser	Ala	Tyr	Leu	Ser
	195						200					205			
Gln	Pro	Leu	Leu	Asp	Gly	Phe	Ala	Met	Gly	Ala	Ser	Val	Thr	Ile	Leu
	210					215					220				
Thr	Ser	Gln	Leu	Lys	His	Leu	Leu	Gly	Val	Arg	Ile	Pro	Arg	His	Gln
225					230					235					240
Gly	Pro	Gly	Met	Val	Val	Leu	Thr	Trp	Leu	Ser	Leu	Leu	Arg	Gly	Ala
			245					250						255	
Gly	Gln	Ala	Asn	Val	Cys	Asp	Val	Val	Thr	Ser	Thr	Val	Cys	Leu	Ala
			260					265					270		
Val	Leu	Leu	Ala	Ala	Lys	Glu	Leu	Ser	Asp	Arg	Tyr	Arg	His	Arg	Leu
	275						280					285			
Arg	Val	Pro	Leu	Pro	Thr	Glu	Leu	Leu	Val	Ile	Val	Val	Ala	Thr	Leu
	290					295					300				
Val	Ser	His	Phe	Gly	Gln	Leu	His	Lys	Arg	Phe	Gly	Ser	Ser	Val	Ala
305					310					315					320
Gly	Asp	Ile	Pro	Thr	Gly	Phe	Met	Pro	Pro	Gln	Val	Pro	Glu	Pro	Arg
			325						330					335	
Leu	Met	Gln	Arg	Val	Ala	Leu	Asp	Ala	Val	Ala	Leu	Ala	Leu	Val	Ala
		340						345					350		
Ala	Ala	Phe	Ser	Ile	Ser	Leu	Ala	Glu	Met	Phe	Ala	Arg	Ser	His	Gly
	355						360					365			
Tyr	Ser	Val	Arg	Ala	Asn	Gln	Glu	Leu	Leu	Ala	Val	His	Arg	Gly	His
	370					375					380				
Leu	Arg	Gly	Ala	Cys	Gln	Gly	Val	Gly	Leu	Pro	Gly	Cys	Gly	Gly	Ser
385					390					395					400
Pro	Ala	Asp	Ala	Leu	Val	Trp	Ala	Gly	Thr	Gly	Thr	Cys	Met	Leu	Val
			405						410					415	
Ser	Thr	Glu	Ala	Gly	Leu	Leu	Ala	Gly	Val	Ile	Leu	Ser	Leu	Leu	Ser
		420						425					430		
Leu	Ala														

<210> 48
 <211> 435
 <212> PRT
 <213> Rattus rattus

<400> 48

Met	Asp	Ala	Ser	Pro	Glu	Pro	Pro	Gln	Lys	Gly	Gly	Thr	Leu	Val	Leu	
1				5					10					15		
Val	Arg	Arg	Gln	Pro	Pro	Val	Ser	Gln	Gly	Leu	Leu	Glu	Thr	Leu	Lys	
			20					25					30			
Ala	Arg	Leu	Lys	Lys	Ser	Cys	Thr	Cys	Ser	Met	Pro	Cys	Ala	Gln	Ala	
		35					40					45				
Leu	Val	Gln	Gly	Leu	Phe	Pro	Val	Ile	Arg	Trp	Leu	Pro	Gln	Tyr	Arg	
	50					55					60					
Leu	Lys	Glu	Tyr	Leu	Ala	Gly	Asp	Val	Met	Ser	Gly	Leu	Val	Ile	Gly	
65					70					75					80	
Ile	Ile	Leu	Val	Pro	Gln	Ala	Ile	Ala	Tyr	Ser	Leu	Leu	Ala	Gly	Leu	
				85					90					95		
Gln	Pro	Ile	Tyr	Ser	Leu	Tyr	Thr	Ser	Phe	Phe	Ala	Asn	Leu	Ile	Tyr	
			100					105					110			
Phe	Leu	Met	Gly	Thr	Ser	Arg	His	Val	Asn	Val	Gly	Ile	Phe	Ser	Leu	
		115					120					125				
Leu	Cys	Leu	Met	Val	Gly	Gln	Val	Val	Asp	Arg	Glu	Leu	Gln	Leu	Ala	
	130					135					140					
Gly	Phe	Asp	Pro	Ser	Gln	Asp	Ser	Leu	Gly	Pro	Gly	Asn	Asn	Asp	Ser	
145					150					155					160	
Thr	Leu	Asn	Asn	Thr	Ala	Thr	Leu	Thr	Val	Gly	Leu	Gln	Asp	Cys	Gly	
				165					170					175		
Arg	Asp	Cys	His	Ala	Ile	Arg	Ile	Ala	Thr	Ala	Leu	Thr	Leu	Met	Ala	
			180					185						190		
Gly	Leu	Tyr	Gln	Val	Leu	Met	Gly	Ile	Leu	Arg	Leu	Gly	Phe	Val	Ser	
		195					200					205				
Thr	Tyr	Leu	Ser	Gln	Pro	Leu	Leu	Asp	Gly	Phe	Ala	Met	Gly	Ala	Ser	
	210					215					220					
Val	Thr	Ile	Leu	Thr	Ser	Gln	Ala	Lys	His	Leu	Leu	Gly	Val	Arg	Ile	
225					230					235					240	
Pro	Arg	His	Gln	Gly	Leu	Gly	Met	Val	Ile	His	Thr	Trp	Leu	Ser	Leu	
			245						250					255		
Leu	Gln	Asn	Val	Gly	Gln	Ala	Asn	Leu	Cys	Asp	Val	Val	Thr	Ser	Ala	
			260					265					270			
Val	Cys	Leu	Ala	Val	Leu	Leu	Thr	Ala	Lys	Glu	Leu	Ser	Asp	Arg	Tyr	
		275					280					285				
Arg	His	Tyr	Leu	Lys	Val	Pro	Val	Pro	Thr	Glu	Leu	Leu	Val	Ile	Val	
	290					295					300					

Val Ala Thr Ile Ala Ser His Phe Gly Gln Leu His Thr Arg Phe Gly
305 310 315 320

Ser Ser Val Ala Gly Asn Ile Pro Thr Gly Phe Val Ala Pro Gln Ile
325 330 335

Pro Asp Pro Lys Ile Met Trp Ser Val Ala Leu Asp Ala Met Ser Leu
340 345 350

Ala Leu Val Gly Ser Ala Phe Ser Ile Ser Leu Ala Glu Met Phe Ala
355 360 365

Arg Ser His Gly Tyr Ser Val Ser Ala Asn Gln Glu Leu Leu Ala Val
370 375 380

Gly Cys Cys Asn Val Leu Pro Ala Phe Phe His Cys Phe Ala Thr Ser
385 390 395 400

Ala Ala Leu Ser Lys Thr Leu Val Lys Ile Ala Thr Gly Cys Gln Thr
405 410 415

Gln Leu Ser Ser Val Val Ser Ala Ala Val Val Leu Leu Val Leu Leu
420 425 430

Val Leu Ala
435

<210> 49
<211> 404
<212> DNA
<213> Homo sapiens

<400> 49
tggaggaggc tttctgtaat acctggaagc tgaccgacca gaactttgat gagtacatga 60
aggctctagg gatgggcttt gtcactaggc aggtgggaaa tgtggacaaa ccaagagtga 120
ttatcagtca agaagaagac aagggtggtga tcaggattca aagtatgttc aagaacacag 180
aggttagttt ccatctggga gaagagtttg atgaaaccac tacagatgac agaaactgca 240
agtttgttgt tagtctggac agagacaaac tcattcacat acagaaatgg gatgacaaag 300
aaacatattt tataagagaa attaagtatg gtgaaatggg tatgaccttt acttttggtg 360
atgatgtggt tgccgttcac cactataaga aggcataaaa atgt 404

<210> 50
<211> 404
<212> DNA
<213> Homo sapiens

<400> 50
tgggtggaggc tttctgtgct acctggaagc tgaccaacag tcagaacttt gatgagtaca 60
tgaaggctct aggcgtgggc tttgccacta ggcagggtgg aaatgtgacc aaaccaacgg 120
taattatcag tcaagaagga gacaaagtgg tcatcaggac tctcagcaca ttcaagaaca 180
cggagattag tttccagctg ggagaagagt ttgatgaaac cactgcagat gatagaaact 240
gtaagtctgt tgtagcctg gatggagaca aacttggtca catacagaaa tgggatggca 300
aagaaacaaa ttttgtaaga gaaattaagg atggcaaaat ggttatgacc cttacttttg 360
gtgatgtggt tgctgttcgc cactatgaga aggcataaaa atgt 404

<210> 51
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 51
 Glu Ala Phe Cys Asn Thr Trp Lys Leu Thr Asp Gln Asn Phe Asp Glu
 1 5 10 15
 Tyr Met Lys Ala Leu Gly Met Gly Phe Val Thr Arg Gln Val Gly Asn
 20 25 30
 Val Asp Lys Pro Arg Val Ile Ile Ser Gln Glu Glu Asp Lys Val Val
 35 40 45
 Ile Arg Ile Gln Ser Met Phe Lys Asn Thr Glu Val Ser Phe His Leu
 50 55 60
 Gly Glu Glu Phe Asp Glu Thr Thr Thr Asp Asp Arg Asn Cys Lys Phe
 65 70 75 80
 Val Val Ser Leu Asp Arg Asp Lys Leu Ile His Ile Gln Lys Trp Asp
 85 90 95
 Asp Lys Glu Thr Tyr Phe Ile Arg Glu Ile Lys Tyr Gly Glu Met Val
 100 105 110
 Met Thr Phe Thr Phe Gly Asp Asp Val Val Ala Val His His Tyr Lys
 115 120 125
 Lys Ala
 130

<210> 52
 <211> 130
 <212> PRT
 <213> Homo sapiens

<400> 52
 Glu Ala Phe Cys Ala Thr Trp Lys Leu Thr Asn Ser Gln Asn Phe Asp
 1 5 10 15
 Glu Tyr Met Lys Ala Leu Gly Val Gly Phe Ala Thr Arg Gln Val Gly
 20 25 30
 Asn Val Thr Lys Pro Thr Val Ile Ile Ser Gln Glu Gly Asp Lys Val
 35 40 45
 Val Ile Arg Thr Leu Ser Thr Phe Lys Asn Thr Glu Ile Ser Phe Gln
 50 55 60
 Leu Gly Glu Glu Phe Asp Glu Thr Thr Ala Asp Asp Arg Asn Cys Lys
 65 70 75 80
 Ser Val Val Ser Leu Asp Gly Asp Lys Leu Val His Ile Gln Lys Trp

				85						90					95		
Asp	Gly	Lys	Glu	Thr	Asn	Phe	Val	Arg	Glu	Ile	Lys	Asp	Gly	Lys	Met		
			100					105					110				
Val	Met	Thr	Leu	Thr	Phe	Gly	Asp	Val	Val	Ala	Val	Arg	His	Tyr	Glu		
			115				120					125					
Lys	Ala																
	130																

<210> 53
 <211> 130
 <212> PRT
 <213> Homo sapiens

Glu	Ala	Phe	Cys	Asn	Thr	Trp	Lys	Leu	Thr	Asp	Gln	Asn	Phe	Asp	Glu		
1				5					10					15			
Tyr	Met	Lys	Ala	Leu	Gly	Met	Gly	Phe	Val	Thr	Arg	Gln	Val	Gly	Asn		
			20					25					30				
Val	Asp	Lys	Pro	Arg	Val	Ile	Ile	Ser	Gln	Glu	Glu	Asp	Lys	Val	Val		
			35				40					45					
Ile	Arg	Ile	Gln	Ser	Met	Phe	Lys	Asn	Thr	Glu	Val	Ser	Phe	His	Leu		
	50					55					60						
Gly	Glu	Glu	Phe	Asp	Glu	Thr	Thr	Thr	Asp	Asp	Arg	Asn	Cys	Lys	Phe		
65					70				75						80		
Val	Val	Ser	Leu	Asp	Arg	Asp	Lys	Leu	Ile	His	Ile	Gln	Lys	Trp	Asp		
				85					90					95			
Asp	Lys	Glu	Thr	Tyr	Phe	Ile	Arg	Glu	Ile	Lys	Tyr	Gly	Glu	Met	Val		
			100					105					110				
Met	Thr	Phe	Thr	Phe	Gly	Asp	Asp	Val	Val	Ala	Val	His	His	Tyr	Lys		
			115				120					125					
Lys	Ala																
	130																

<210> 54
 <211> 130
 <212> PRT
 <213> Homo sapiens

Glu	Ala	Phe	Cys	Ala	Thr	Trp	Lys	Leu	Thr	Asn	Ser	Gln	Asn	Phe	Asp		
1				5					10					15			
Glu	Tyr	Met	Lys	Ala	Leu	Gly	Val	Gly	Phe	Ala	Thr	Arg	Gln	Val	Gly		
			20					25					30				

Asn Val Thr Lys Pro Thr Val Ile Ile Ser Gln Glu Gly Asp Lys Val
 35 40 45
 Val Ile Arg Thr Leu Ser Thr Phe Lys Asn Thr Glu Ile Ser Phe Gln
 50 55 60
 Leu Gly Glu Glu Phe Asp Glu Thr Thr Ala Asp Asp Arg Asn Cys Lys
 65 70 75 80
 Ser Val Val Ser Leu Asp Gly Asp Lys Leu Val His Ile Gln Lys Trp
 85 90 95
 Asp Gly Lys Glu Thr Asn Phe Val Arg Glu Ile Lys Asp Gly Lys Met
 100 105 110
 Val Met Thr Leu Thr Phe Gly Asp Val Val Ala Val Arg His Tyr Glu
 115 120 125
 Lys Ala
 130

<210> 55
 <211> 132
 <212> PRT
 <213> Homo sapiens

<400> 55
 Val Glu Glu Ala Phe Cys Asn Thr Trp Lys Leu Thr Asp Gln Asn Phe
 1 5 10 15
 Asp Glu Tyr Met Lys Ala Leu Gly Met Gly Phe Val Thr Arg Gln Val
 20 25 30
 Gly Asn Val Asp Lys Pro Arg Val Ile Ile Ser Gln Glu Glu Asp Lys
 35 40 45
 Val Val Ile Arg Ile Gln Ser Met Phe Lys Asn Thr Glu Val Ser Phe
 50 55 60
 His Leu Gly Glu Glu Phe Asp Glu Thr Thr Thr Asp Asp Arg Asn Cys
 65 70 75 80
 Lys Phe Val Val Ser Leu Asp Arg Asp Lys Leu Ile His Ile Gln Lys
 85 90 95
 Trp Asp Asp Lys Glu Thr Tyr Phe Ile Arg Glu Ile Lys Tyr Gly Glu
 100 105 110
 Met Val Met Thr Phe Thr Phe Gly Asp Asp Val Val Ala Val His His
 115 120 125
 Tyr Lys Lys Ala
 130

<210> 56
 <211> 132
 <212> PRT
 <213> Homo sapiens

<400> 56
 Val Glu Glu Ala Phe Cys Asn Thr Trp Lys Leu Thr Asp Gln Asn Phe
 1 5 10 15
 Asp Glu Tyr Met Lys Ala Leu Gly Met Gly Phe Val Thr Arg Gln Val
 20 25 30
 Gly Asn Val Asp Lys Pro Arg Val Ile Ile Ser Gln Glu Glu Asp Lys
 35 40 45
 Val Val Ile Arg Ile Gln Ser Met Phe Lys Asn Thr Glu Val Ser Phe
 50 55 60
 His Leu Gly Glu Glu Phe Asp Glu Thr Thr Thr Asp Asp Arg Asn Cys
 65 70 75 80
 Lys Phe Val Val Ser Leu Asp Arg Asp Lys Leu Ile His Ile Gln Lys
 85 90 95
 Trp Asp Asp Lys Glu Thr Tyr Phe Ile Arg Glu Ile Lys Tyr Gly Glu
 100 105 110
 Met Val Met Thr Phe Thr Phe Gly Asp Asp Val Val Ala Val His His
 115 120 125
 Tyr Lys Lys Ala
 130

<210> 57
 <211> 272
 <212> PRT
 <213> Homo sapiens

<400> 57
 Ala Cys Gly Leu Gly Phe Val Pro Val Val Tyr Tyr Ser Leu Leu Leu
 1 5 10 15
 Cys Leu Gly Leu Pro Ala Asn Ile Leu Thr Val Ile Ile Leu Ser Gln
 20 25 30
 Leu Val Ala Arg Arg Gln Lys Ser Ser Tyr Asn Tyr Leu Leu Ala Leu
 35 40 45
 Ala Ala Ala Asp Ile Leu Val Leu Phe Phe Ile Val Phe Val Asp Phe
 50 55 60
 Leu Leu Glu Asp Phe Ile Leu Asn Met Gln Met Pro Gln Val Pro Asp
 65 70 75 80
 Lys Ile Ile Glu Val Leu Glu Phe Ser Ser Ile His Thr Ser Ile Trp
 85 90 95

Ile Thr Val Pro Leu Thr Ile Asp Arg Tyr Ile Ala Val Cys His Pro
 100 105 110
 Leu Lys Tyr His Thr Val Ser Tyr Pro Ala Arg Thr Arg Lys Val Ile
 115 120 125
 Val Ser Val Tyr Ile Thr Cys Phe Leu Thr Ser Ile Pro Tyr Tyr Trp
 130 135 140
 Trp Pro Asn Ile Trp Thr Glu Asp Tyr Ile Ser Thr Ser Val His His
 145 150 155 160
 Val Leu Ile Trp Ile His Cys Phe Thr Val Tyr Leu Val Pro Cys Ser
 165 170 175
 Ile Phe Phe Ile Leu Asn Ser Ile Ile Val Tyr Lys Leu Arg Arg Lys
 180 185 190
 Ser Asn Phe Arg Leu Arg Gly Tyr Ser Thr Gly Lys Thr Thr Ala Ile
 195 200 205
 Leu Phe Thr Ile Thr Ser Ile Phe Ala Thr Leu Trp Ala Pro Arg Ile
 210 215 220
 Ile Met Ile Leu Tyr His Leu Tyr Gly Ala Pro Ile Gln Asn Arg Trp
 225 230 235 240
 Leu Val His Ile Met Ser Asp Ile Ala Asn Met Leu Ala Leu Leu Asn
 245 250 255
 Thr Ala Ile Asn Phe Phe Leu Tyr Cys Phe Ile Ser Lys Arg Phe Arg
 260 265 270

<210> 58
 <211> 272
 <212> PRT
 <213> Homo sapiens

<400> 58
 Ala Cys Gly Leu Gly Phe Val Pro Val Val Tyr Tyr Ser Leu Leu Leu
 1 5 10 15
 Cys Leu Gly Leu Pro Ala Asn Ile Leu Thr Val Ile Ile Leu Ser Gln
 20 25 30
 Leu Val Ala Arg Arg Gln Lys Ser Ser Tyr Asn Tyr Leu Leu Ala Leu
 35 40 45
 Ala Ala Ala Asp Ile Leu Val Leu Phe Phe Ile Val Phe Val Asp Phe
 50 55 60
 Leu Leu Glu Asp Phe Ile Leu Asn Met Gln Met Pro Gln Val Pro Asp

65	70	75	80
Lys Ile Ile Glu Val Leu Glu Phe Ser Ser Ile His Thr Ser Ile Trp	85	90	95
Ile Thr Val Pro Leu Thr Ile Asp Arg Tyr Ile Ala Val Cys His Pro	100	105	110
Leu Lys Tyr His Thr Val Ser Tyr Pro Ala Arg Thr Arg Lys Val Ile	115	120	125
Val Ser Val Tyr Ile Thr Cys Phe Leu Thr Ser Ile Pro Tyr Tyr Trp	130	135	140
Trp Pro Asn Ile Trp Thr Glu Asp Tyr Ile Ser Thr Ser Val His His	145	150	155
Val Leu Ile Trp Ile His Cys Phe Thr Val Tyr Leu Val Pro Cys Ser	165	170	175
Ile Phe Phe Ile Leu Asn Ser Ile Ile Val Tyr Lys Leu Arg Arg Lys	180	185	190
Ser Asn Phe Arg Leu Arg Gly Tyr Ser Thr Gly Lys Thr Thr Ala Ile	195	200	205
Leu Phe Thr Ile Thr Ser Ile Phe Ala Thr Leu Trp Ala Pro Arg Ile	210	215	220
Ile Met Ile Leu Tyr His Leu Tyr Gly Ala Pro Ile Gln Asn Arg Trp	225	230	235
Leu Val His Ile Met Ser Asp Ile Ala Asn Met Leu Ala Leu Leu Asn	245	250	255
Thr Ala Ile Asn Phe Phe Leu Tyr Cys Phe Ile Ser Lys Arg Phe Arg	260	265	270

<210> 59

<211> 350

<212> PRT

<213> Homo sapiens

<400> 59

Met Glu His Thr His Ala His Leu Ala Ala Asn Ser Ser Leu Ser Trp	1	5	10	15
Trp Ser Pro Gly Ser Ala Cys Gly Leu Gly Phe Val Pro Val Val Tyr	20	25	30	
Tyr Ser Leu Leu Leu Cys Leu Gly Leu Pro Ala Asn Ile Leu Thr Val	35	40	45	

<210> 60
 <211> 350
 <212> PRT
 <213> Homo sapiens

<400> 60

Met	Glu	His	Thr	His	Ala	His	Leu	Ala	Ala	Asn	Ser	Ser	Leu	Ser	Trp
1				5					10					15	
Trp	Ser	Pro	Gly	Ser	Ala	Cys	Gly	Leu	Gly	Phe	Val	Pro	Val	Val	Tyr
			20					25					30		
Tyr	Ser	Leu	Leu	Leu	Cys	Leu	Gly	Leu	Pro	Ala	Asn	Ile	Leu	Thr	Val
		35					40					45			
Ile	Ile	Leu	Ser	Gln	Leu	Val	Ala	Arg	Arg	Gln	Lys	Ser	Ser	Tyr	Asn
		50				55					60				
Tyr	Leu	Leu	Ala	Leu	Ala	Ala	Ala	Asp	Ile	Leu	Val	Leu	Phe	Phe	Ile
	65				70					75					80
Val	Phe	Val	Asp	Phe	Leu	Leu	Glu	Asp	Phe	Ile	Leu	Asn	Met	Gln	Met
				85					90					95	
Pro	Gln	Val	Pro	Asp	Lys	Ile	Ile	Glu	Val	Leu	Glu	Phe	Ser	Ser	Ile
			100					105					110		
His	Thr	Ser	Ile	Trp	Ile	Thr	Val	Pro	Leu	Thr	Ile	Asp	Arg	Tyr	Ile
		115					120					125			
Ala	Val	Cys	His	Pro	Leu	Lys	Tyr	His	Thr	Val	Ser	Tyr	Pro	Ala	Arg
	130					135					140				
Thr	Arg	Lys	Val	Ile	Val	Ser	Val	Tyr	Ile	Thr	Cys	Phe	Leu	Thr	Ser
145					150					155					160
Ile	Pro	Tyr	Tyr	Trp	Trp	Pro	Asn	Ile	Trp	Thr	Glu	Asp	Tyr	Ile	Ser
				165					170					175	
Thr	Ser	Val	His	His	Val	Leu	Ile	Trp	Ile	His	Cys	Phe	Thr	Val	Tyr
			180					185					190		
Leu	Val	Pro	Cys	Ser	Ile	Phe	Phe	Ile	Leu	Asn	Ser	Ile	Ile	Val	Tyr
		195					200					205			
Lys	Leu	Arg	Arg	Lys	Ser	Asn	Phe	Arg	Leu	Arg	Gly	Tyr	Ser	Thr	Gly
	210					215					220				
Lys	Thr	Thr	Ala	Ile	Leu	Phe	Thr	Ile	Thr	Ser	Ile	Phe	Ala	Thr	Leu
225					230					235					240
Trp	Ala	Pro	Arg	Ile	Ile	Met	Ile	Leu	Tyr	His	Leu	Tyr	Gly	Ala	Pro
				245					250					255	
Ile	Gln	Asn	Arg	Trp	Leu	Val	His	Ile	Met	Ser	Asp	Ile	Ala	Asn	Met
			260					265					270		

Leu Ala Leu Leu Asn Thr Ala Ile Asn Phe Phe Leu Tyr Cys Phe Ile
 275 280 285
 Ser Lys Arg Phe Arg Thr Met Ala Ala Ala Thr Leu Lys Ala Phe Phe
 290 295 300
 Lys Cys Gln Lys Gln Pro Val Gln Phe Tyr Thr Asn His Asn Phe Ser
 305 310 315 320
 Ile Thr Ser Ser Pro Trp Ile Ser Pro Ala Asn Ser His Cys Ile Lys
 325 330 335
 Met Leu Val Tyr Gln Tyr Asp Lys Asn Gly Lys Pro Ile Lys
 340 345 350

<210> 61
 <211> 657
 <212> PRT
 <213> Homo sapiens

<400> 61
 Lys His Ser Asn Lys Lys Val Met Arg Thr Lys Ser Ser Glu Lys Ala
 1 5 10 15
 Ala Asn Asp Asp His Ser Val Arg Val Ala Arg Glu Asp Val Arg Glu
 20 25 30
 Ser Cys Pro Pro Leu Gly Leu Glu Thr Leu Lys Ile Thr Asp Phe Gln
 35 40 45
 Leu His Ala Ser Thr Val Lys Arg Tyr Gly Leu Gly Ala His Arg Gly
 50 55 60
 Arg Leu Asn Ile Gln Ala Gly Ile Asn Glu Asn Asp Phe Tyr Asp Gly
 65 70 75 80
 Ala Trp Cys Ala Gly Arg Asn Asp Leu Gln Gln Trp Ile Glu Val Asp
 85 90 95
 Ala Arg Arg Leu Thr Arg Phe Thr Gly Val Ile Thr Gln Gly Arg Asn
 100 105 110
 Ser Leu Trp Leu Ser Asp Trp Val Thr Ser Tyr Lys Val Met Val Ser
 115 120 125
 Asn Asp Ser His Thr Trp Val Thr Val Lys Asn Gly Ser Gly Asp Met
 130 135 140
 Ile Phe Glu Gly Asn Ser Glu Lys Glu Ile Pro Val Leu Asn Glu Leu
 145 150 155 160
 Pro Val Pro Met Val Ala Arg Tyr Ile Arg Ile Asn Pro Gln Ser Trp
 165 170 175
 Phe Asp Asn Gly Ser Ile Cys Met Arg Met Glu Ile Leu Gly Cys Pro

			180				185				190					
Leu	Pro	Asp	Pro	Asn	Asn	Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	
		195					200					205				
Thr	Asp	Asp	Leu	Asp	Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	
	210					215					220					
Val	Gln	Leu	Met	Lys	Val	Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	
225					230					235					240	
Ile	Tyr	Asn	Ile	Gly	Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	
				245					250					255		
Glu	Ile	Ser	Asp	His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	
			260					265					270			
His	Tyr	Ile	Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	
		275					280					285				
Leu	Leu	Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	
	290					295					300					
Ala	Arg	Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro	
305					310					315					320	
Ser	Leu	Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser	Glu	
				325					330					335		
Leu	Gly	Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile	Asp	Ile	
			340					345					350			
Asn	Asn	Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu	Ala	Glu	Asp	
		355					360					365				
Arg	Gln	Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr	Ile	Ala	Ile	Pro	
	370					375					380					
Glu	Trp	Phe	Leu	Ser	Glu	Asn	Ala	Thr	Val	Val	Ala	Ala	Glu	Thr	Arg	
385					390					395					400	
Ala	Val	Ile	Ala	Trp	Met	Glu	Lys	Ile	Pro	Phe	Val	Leu	Gly	Gly	Asn	
			405						410				415			
Leu	Gln	Gly	Gly	Glu	Leu	Val	Val	Ala	Tyr	Pro	Tyr	Asp	Leu	Val	Arg	
			420					425					430			
Ser	Pro	Trp	Lys	Thr	Gln	Glu	His	Thr	Pro	Thr	Pro	Asp	Asp	His	Val	
		435					440					445				
Phe	Arg	Trp	Leu	Ala	Tyr	Ser	Tyr	Ala	Ser	Thr	His	Arg	Leu	Met	Thr	
	450					455					460					
Asp	Ala	Arg	Arg	Arg	Val	Cys	His	Thr	Glu	Asp	Phe	Gln	Lys	Glu	Glu	
465					470					475					480	
Gly	Thr	Val	Asn	Gly	Ala	Ser	Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	

Ala	Trp	Cys	Ala	Gly	Arg	Asn	Asp	Leu	Gln	Gln	Trp	Ile	Glu	Val	Asp	
				85					90					95		
Ala	Arg	Arg	Leu	Thr	Arg	Phe	Thr	Gly	Val	Ile	Thr	Gln	Gly	Arg	Asn	
			100					105					110			
Ser	Leu	Trp	Leu	Ser	Asp	Trp	Val	Thr	Ser	Tyr	Lys	Val	Met	Val	Ser	
		115					120					125				
Asn	Asp	Ser	His	Thr	Trp	Val	Thr	Val	Lys	Asn	Gly	Ser	Gly	Asp	Met	
	130					135					140					
Ile	Phe	Glu	Gly	Asn	Ser	Glu	Lys	Glu	Ile	Pro	Val	Leu	Asn	Glu	Leu	
145				150					155						160	
Pro	Val	Pro	Met	Val	Ala	Arg	Tyr	Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	
				165				170						175		
Phe	Asp	Asn	Gly	Ser	Ile	Cys	Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	
			180					185					190			
Leu	Pro	Asp	Pro	Asn	Asn	Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	
		195					200					205				
Thr	Asp	Asp	Leu	Asp	Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	
	210					215					220					
Leu	Met	Lys	Val	Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	
225					230					235					240	
Asn	Ile	Gly	Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	
				245					250					255		
Ser	Asp	His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	
			260					265					270			
Ile	Ala	Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu	
		275					280					285				
Leu	Leu	Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala	Arg	
	290					295					300					
Ile	Val	His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro	Ser	Leu	
305					310					315					320	
Asn	Pro	Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser	Glu	Leu	Gly	
				325					330					335		
Gly	Trp	Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile	Asp	Ile	Asn	Asn	
			340					345					350			
Asn	Phe	Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu	Ala	Glu	Asp	Arg	Gln	
		355					360					365				
Asn	Val	Pro	Arg	Lys	Val	Pro	Asn	His	Tyr	Ile	Ala	Ile	Pro	Glu	Trp	
	370					375					380					

Phe Leu Ser Glu Asn Ala Thr Val Ala Ala Glu Thr Arg Ala Val Ile
385 390 395 400
Ala Trp Met Glu Lys Ile Pro Phe Val Leu Gly Gly Asn Leu Gln Gly
405 410 415
Gly Glu Leu Val Val Ala Tyr Pro Tyr Asp Leu Val Arg Ser Pro Trp
420 425 430
Lys Thr Gln Glu His Thr Pro Thr Pro Asp Asp His Val Phe Arg Trp
435 440 445
Leu Ala Tyr Ser Tyr Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg
450 455 460
Arg Arg Val Cys His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val
465 470 475 480
Asn Gly Ala Ser Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser
485 490 495
Tyr Leu His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp
500 505 510
Lys Tyr Pro His Glu Ser Gln Leu Pro Glu Glu Trp Glu Asn Asn Arg
515 520 525
Glu Ser Leu Ile Val Phe Met Glu Gln Val His Arg Gly Ile Lys Gly
530 535 540
Leu Val Arg Asp Ser His Gly Lys Gly Ile Pro Asn Ala Ile Ile Ser
545 550 555 560
Val Glu Gly Ile Asn His Asp Ile Arg Thr Ala Asn Asp Gly Asp Tyr
565 570 575
Trp Arg Leu Leu Asn Pro Gly Glu Tyr Val Val Thr Ala Lys Ala Glu
580 585 590
Gly Phe Thr Ala Ser Thr Lys Asn Cys Met Val Gly Tyr Asp Met Gly
595 600 605
Ala Thr Arg Cys Asp Phe Thr Leu Ser Lys Thr Asn Met Ala Arg Ile
610 615 620
Arg Glu Ile Met Glu Lys Phe Gly Lys Gln Pro Val Ser Leu Pro Ala
625 630 635 640
Arg Arg Leu Lys Leu Arg Gly Arg Lys Arg Arg Gln Arg Gly
645 650

<210> 63
<211> 509
<212> PRT
<213> Homo sapiens

<400> 63

Asn	Ser	Glu	Lys	Glu	Ile	Pro	Val	Leu	Asn	Glu	Leu	Pro	Val	Pro	Met	
1				5					10						15	
Val	Ala	Arg	Tyr	Ile	Arg	Ile	Asn	Pro	Gln	Ser	Trp	Phe	Asp	Asn	Gly	
			20					25					30			
Ser	Ile	Cys	Met	Arg	Met	Glu	Ile	Leu	Gly	Cys	Pro	Leu	Pro	Asp	Pro	
		35					40					45				
Asn	Asn	Tyr	Tyr	His	Arg	Arg	Asn	Glu	Met	Thr	Thr	Thr	Asp	Asp	Leu	
	50					55					60					
Asp	Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Val	Gln	Leu	Met	
65					70					75					80	
Lys	Val	Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	
			85						90					95		
Gly	Lys	Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp	
			100					105					110			
His	Pro	Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile	Ala	
		115					120					125				
Gly	Ala	His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu	Leu	Leu	
	130					135					140					
Val	Gln	Phe	Val	Cys	Gln	Glu	Tyr	Leu	Ala	Arg	Asn	Ala	Arg	Ile	Val	
145					150					155					160	
His	Leu	Val	Glu	Glu	Thr	Arg	Ile	His	Val	Leu	Pro	Ser	Leu	Asn	Pro	
			165						170					175		
Asp	Gly	Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser	Glu	Leu	Gly	Gly	Trp	
		180						185					190			
Ser	Leu	Gly	Arg	Trp	Thr	His	Asp	Gly	Ile	Asp	Ile	Asn	Asn	Asn	Phe	
		195					200					205				
Pro	Asp	Leu	Asn	Thr	Leu	Leu	Trp	Glu	Ala	Glu	Asp	Arg	Gln	Asn	Val	
	210					215					220					
Pro	Arg	Lys	Val	Pro	Asn	His	Tyr	Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	
225					230					235					240	
Ser	Glu	Asn	Ala	Thr	Val	Val	Ala	Ala	Glu	Thr	Arg	Ala	Val	Ile	Ala	
			245						250					255		
Trp	Met	Glu	Lys	Ile	Pro	Phe	Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	
		260						265					270			
Glu	Leu	Val	Val	Ala	Tyr	Pro	Tyr	Asp	Leu	Val	Arg	Ser	Pro	Trp	Lys	
		275					280					285				
Thr	Gln	Glu	His	Thr	Pro	Thr	Pro	Asp	Asp	His	Val	Phe	Arg	Trp	Leu	
	290					295					300					

Ala Tyr Ser Tyr Ala Ser Thr His Arg Leu Met Thr Asp Ala Arg Arg
 305 310 315 320
 Arg Val Cys His Thr Glu Asp Phe Gln Lys Glu Glu Gly Thr Val Asn
 325 330 335
 Gly Ala Ser Trp His Thr Val Ala Gly Ser Leu Asn Asp Phe Ser Tyr
 340 345 350
 Leu His Thr Asn Cys Phe Glu Leu Ser Ile Tyr Val Gly Cys Asp Lys
 355 360 365
 Tyr Pro His Glu Ser Gln Leu Pro Glu Glu Trp Glu Asn Asn Arg Glu
 370 375 380
 Ser Leu Ile Val Phe Met Glu Gln Val His Arg Gly Ile Lys Gly Leu
 385 390 395 400
 Val Arg Asp Ser His Gly Lys Gly Ile Pro Asn Ala Ile Ile Ser Val
 405 410 415
 Glu Gly Ile Asn His Asp Ile Arg Thr Ala Asn Asp Gly Asp Tyr Trp
 420 425 430
 Arg Leu Leu Asn Pro Gly Glu Tyr Val Val Thr Ala Lys Ala Glu Gly
 435 440 445
 Phe Thr Ala Ser Thr Lys Asn Cys Met Val Gly Tyr Asp Met Gly Ala
 450 455 460
 Thr Arg Cys Asp Phe Thr Leu Ser Lys Thr Asn Met Ala Arg Ile Arg
 465 470 475 480
 Glu Ile Met Glu Lys Phe Gly Lys Gln Pro Val Ser Leu Pro Ala Arg
 485 490 495
 Arg Leu Lys Leu Arg Gly Arg Lys Arg Arg Gln Arg Gly
 500 505

<210> 64
 <211> 506
 <212> PRT
 <213> Homo sapiens

<400> 64
 Asn Ser Glu Lys Glu Ile Pro Val Leu Asn Glu Leu Pro Val Pro Met
 1 5 10 15
 Val Ala Arg Tyr Ile Arg Ile Asn Pro Gln Ser Trp Phe Asp Asn Gly
 20 25 30
 Ser Ile Cys Met Arg Met Glu Ile Leu Gly Cys Pro Leu Pro Asp Pro
 35 40 45
 Asn Asn Tyr Tyr His Arg Arg Asn Glu Met Thr Thr Thr Asp Asp Leu

50					55					60					
Asp	Phe	Lys	His	His	Asn	Tyr	Lys	Glu	Met	Arg	Gln	Leu	Met	Lys	Val
65					70					75					80
Val	Asn	Glu	Met	Cys	Pro	Asn	Ile	Thr	Arg	Ile	Tyr	Asn	Ile	Gly	Lys
				85					90					95	
Ser	His	Gln	Gly	Leu	Lys	Leu	Tyr	Ala	Val	Glu	Ile	Ser	Asp	His	Pro
			100					105					110		
Gly	Glu	His	Glu	Val	Gly	Glu	Pro	Glu	Phe	His	Tyr	Ile	Ala	Gly	Ala
		115					120					125			
His	Gly	Asn	Glu	Val	Leu	Gly	Arg	Glu	Leu	Leu	Leu	Leu	Leu	Leu	His
	130					135					140				
Phe	Leu	Cys	Gln	Glu	Tyr	Ser	Ala	Gln	Asn	Ala	Arg	Ile	Val	Arg	Leu
145					150					155					160
Val	Glu	Glu	Thr	Arg	Ile	His	Ile	Leu	Pro	Ser	Leu	Asn	Pro	Asp	Gly
				165					170					175	
Tyr	Glu	Lys	Ala	Tyr	Glu	Gly	Gly	Ser	Glu	Leu	Gly	Gly	Trp	Ser	Leu
			180					185					190		
Gly	Arg	Trp	Thr	His	Asp	Gly	Ile	Asp	Ile	Asn	Asn	Asn	Phe	Pro	Asp
		195					200					205			
Leu	Asn	Ser	Leu	Leu	Trp	Glu	Ala	Glu	Asp	Gln	Gln	Asn	Ala	Pro	Arg
	210					215					220				
Lys	Val	Pro	Asn	His	Tyr	Ile	Ala	Ile	Pro	Glu	Trp	Phe	Leu	Ser	Glu
225					230					235					240
Asn	Ala	Thr	Val	Ala	Thr	Glu	Thr	Arg	Ala	Val	Ile	Ala	Trp	Met	Glu
				245					250					255	
Lys	Ile	Pro	Phe	Val	Leu	Gly	Gly	Asn	Leu	Gln	Gly	Gly	Glu	Leu	Val
			260					265					270		
Val	Ala	Tyr	Pro	Tyr	Asp	Met	Val	Arg	Ser	Leu	Trp	Lys	Thr	Gln	Glu
		275					280					285			
His	Thr	Pro	Thr	Pro	Asp	Asp	His	Val	Phe	Arg	Trp	Leu	Ala	Tyr	Ser
	290					295					300				
Tyr	Ala	Ser	Thr	His	Arg	Leu	Met	Thr	Asp	Ala	Arg	Arg	Arg	Val	Cys
305					310					315					320
His	Thr	Glu	Asp	Phe	Gln	Lys	Glu	Glu	Gly	Thr	Val	Asn	Gly	Ala	Ser
				325					330					335	
Trp	His	Thr	Val	Ala	Gly	Ser	Leu	Asn	Asp	Phe	Ser	Tyr	Leu	His	Thr
			340					345					350		
Asn	Cys	Phe	Glu	Leu	Ser	Ile	Tyr	Val	Gly	Cys	Asp	Lys	Tyr	Pro	His

355					360					365						
Glu	Ser	Glu	Leu	Pro	Glu	Glu	Trp	Glu	Asn	Asn	Arg	Glu	Ser	Leu	Ile	
370					375					380						
Val	Phe	Met	Glu	Gln	Val	His	Arg	Gly	Ile	Lys	Gly	Ile	Val	Arg	Asp	
385					390					395					400	
Leu	Gln	Gly	Lys	Gly	Ile	Ser	Asn	Ala	Val	Ile	Ser	Val	Glu	Gly	Val	
405					410					415						
Asn	His	Asp	Ile	Arg	Thr	Ala	Ser	Asp	Gly	Asp	Tyr	Trp	Arg	Leu	Leu	
420					425					430						
Asn	Pro	Gly	Glu	Tyr	Val	Val	Thr	Ala	Lys	Ala	Glu	Gly	Phe	Ile	Thr	
435					440					445						
Ser	Thr	Lys	Asn	Cys	Met	Val	Gly	Tyr	Asp	Met	Gly	Ala	Thr	Arg	Cys	
450					455					460						
Asp	Phe	Thr	Leu	Thr	Lys	Thr	Asn	Leu	Ala	Arg	Ile	Arg	Glu	Ile	Met	
465					470					475					480	
Glu	Thr	Phe	Gly	Lys	Gln	Pro	Val	Ser	Leu	Pro	Ser	Arg	Arg	Leu	Lys	
485					490					495						
Leu	Arg	Gly	Arg	Lys	Arg	Arg	Gln	Arg	Gly							
500					505											

<210> 65
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

<400> 65
 tcacaggatg atgacacaag ctcc 24

<210> 66
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

<400> 66
 atgtgatctt tggctgtgaa gt 22

<210> 67

<211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 67
 ctaccccatg gcctccatcg agt 23

 <210> 68
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 68
 ggatgtccaa gccatcctt 19

 <210> 69
 <211> 18
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 69
 tgactgctgc ccactgca 18

 <210> 70
 <211> 24
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 70
 caccgaccgc tccatctacc ggat 24

 <210> 71
 <211> 20
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> Description of Artificial Sequence:chemically synthesized oligonucleotide

<400> 71
gagatacacg tccccagcgt 20

<210> 72
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically synthesized oligonucleotide

<400> 72
ctcaagtacc acacggtctc at 22

<210> 73
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically synthesized oligonucleotide

<400> 73
ccgcacccgg aaagtcattg taagt 25

<210> 74
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically synthesized oligonucleotide

<400> 74
tcaggaagca ggtgatgtaa ac 22

<210> 75
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:chemically synthesized oligonucleotide

<400> 75
ggaagctgac cgaccagaac 20

<210> 76
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 76
 agcccatccc tagagccttc atgtactca 29

 <210> 77
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 77
 atttcccacc tgcctagtga ca 22

 <210> 78
 <211> 21
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:chemically
 synthesized oligonucleotide

 <400> 78
 cagctcgctg tcttggtggt c 21